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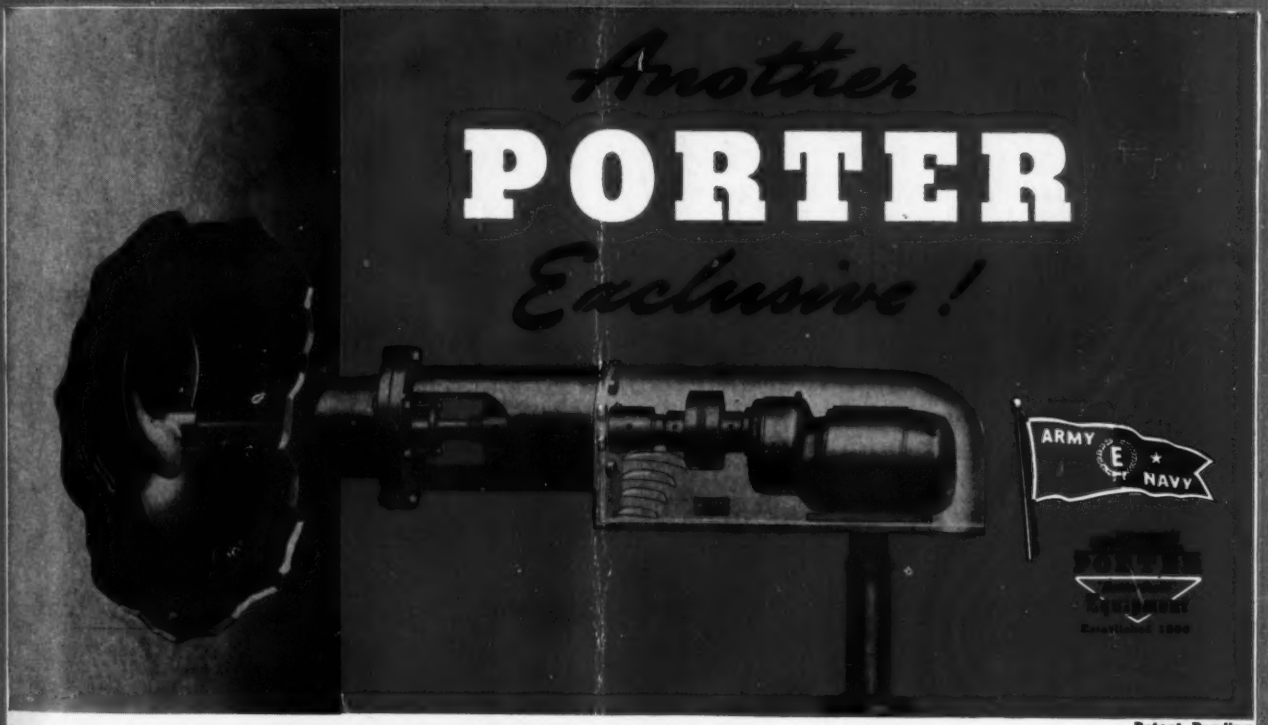
PAPER TRADE JOURNAL

JANUARY 27, 1944



Patent Pending

. . . the new Porter Side-Entering Mixer can be repacked from the outside in 5 minutes . . .

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NEXT MINUTE · *Paper Mill Machinery*

Reconversion is no problem with us; it's simply a matter of issuing orders and blueprints to our Pattern Shop, Foundry, Machine Shop, etc. Of course, we've added many new, modern, precision-production machine tools and other equipment to increase our war machinery output, BUT everything we've added will remain to help us build even better paper mill machinery. We can be ready to start manufacturing your new or replacement machinery needs in a minute after our government permits us to do so. But we can't start manufacturing until designs and specifications are determined. The sooner you consult our engineers, the sooner you place your order—then, the sooner you'll get your machinery. . . . The Downingtown Manufacturing Company, Downingtown, Pa.

PAPER TRADE JOURNAL

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Title Reg. U. S. Pat. Off.

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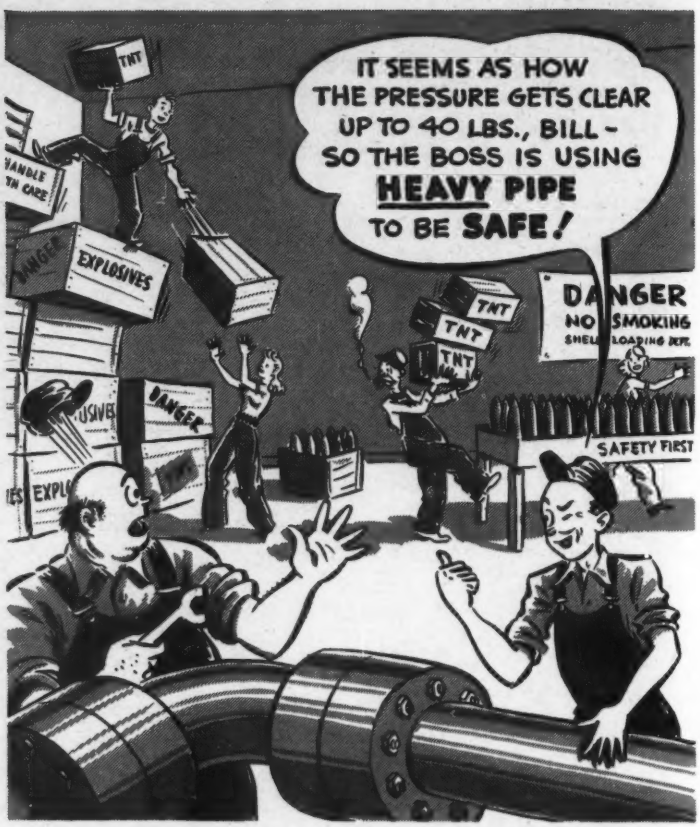
Yes, it happens in the best regulated plants!


IT SEEMS AS HOW THE PRESSURE GETS CLEAR UP TO 40 LBS., BILL - SO THE BOSS IS USING HEAVY PIPE TO BE SAFE!
TNT
TNT
TNT
EXPLOSIVES
DANGER
SAFETY FIRST

THE inconsistency pointed out here isn't as rare as you might think. It occurs whenever pipe heavier than needed is used for low or moderate pressure services like those listed below. We have simply exercised a little cartoon license to bring this fact out into the light of day.

Of course the heavy pipe isn't actually used for safety. It is used simply because of the time-honored tendency to think of Standard Thickness pipe as the low point on the scale of available pipe thicknesses.

Actually Standard Thickness Pipe is fairly high on that scale. In hundreds of applications light, but remarkably strong Taylor Spiral Pipe can handle the greater part of services which are too often thoughtlessly assigned to heavier pipe.

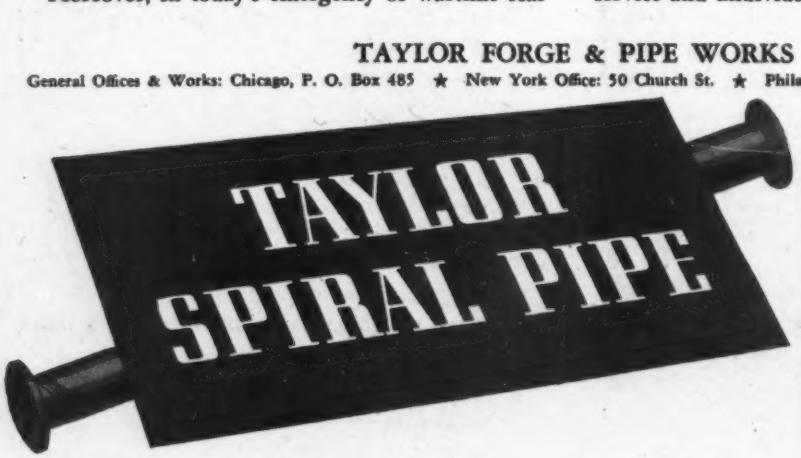
Taylor Spiral Pipe can handle these jobs adequately and with strength and service life to spare. In many cases the installed cost of Taylor Spiral is no more than *half* that of the heavy pipe it replaces. So plants that use Taylor Spiral for these low and moderate pressure applications have saved many thousands of dollars.

Moreover, in today's emergency of wartime scarcity, the conservation of steel effected by Taylor Spiral threatens to outrank even its big saving of dollars!

Changing to Taylor Spiral Pipe for services like those listed is made easy by the complete range of sizes and fittings. Thicknesses range from 18 to 6 gauge; sizes from 4" to 42"; joint lengths up to 40 ft. All types of end joints and couplings, all kinds of fittings and specials or fabricated assemblies, are produced by Taylor Forge, assuring a complete service and undivided responsibility.

TAYLOR FORGE & PIPE WORKS

General Offices & Works: Chicago, P. O. Box 485 ★ New York Office: 50 Church St. ★ Philadelphia Office: Broad Street Station Bldg.



CHANGE TO TAYLOR SPIRAL PIPE FOR:

- High and Low Pressure Water Lines
- Low Pressure Steam and Air Lines
- Steam and Diesel Exhaust Lines
- Vacuum and Suction Lines
- Blower Piping
- Sand and Gravel Lines
- Industrial Gas Lines
- Oil and Gas Gathering Lines
- Swing Pipe
- Spray Pond Piping
- Hydraulic Mining
- Dredge Lines

PAPER TRADE JOURNAL
Title Reg. U. S. Pat. Off.

Vol. 118, No. 4 Thursday, January 27, 1944 Price Ten Cents

Swedish Trade Mission Reaches New York

Delegation Appointed By Federation of Swedish Industries and General Export Association and Approved By Swedish Government Arrives — Group Will Reestablish Connections Severed By War.

A Swedish Trade Mission is at the present time visiting the United States with the object of reestablishing the connections between various American and Swedish industries and business circles which, unfortunately, have been cut off for several years now owing to repercussions of the war, particularly the North Sea blockade. The delegation which was appointed by the Federation of Swedish Industries and the General Export Association of Sweden with the approval of the Swedish Government and the authorities in Washington, is headed by Mr. Rolf von Heidenstam, vice-president of the Swedish Export Association and Chamberlain to the King of Sweden. Other members of the Mission, all experts in various fields of special interest to the trade between the two countries are: Goesta A. Hall; Bo Hoeglund; Rudolf Molin; Sune G. M. Schele; H. V. Toernebohm and Sven L. Wahlstroem. Mr. Hall will attend particularly to matters pertaining to the forest industries being at the same time a delegate of the Swedish Cellulose Association and the Swedish Paper Mills Association.

The Mission will have its headquarters at the Swedish Chamber of Commerce, International Building, Rockefeller Center, New York.

Visitors Had Stormy Trip

The Swedish visitors arrived at Philadelphia on M/S *Mangalora*, a new ship belonging to the Swedish East Asiatic Line and now chartered by the International Red Cross for their shipments of packages to the prisoners of war in Europe. The ship left Gothenburg three days before Christmas and the crossing was so bad that it took 27 days instead of 16 for the ship to complete her maiden voyage.

"I have many happy recollections from the time I had the privilege to study at the Bureau of Standards and the Forest Products Laboratories and the subsequent years spent with the American Writing Paper Company and the Albemarle Paper Manufacturing Company," Mr. Hall said: "At Albemarle I had the good fortune to work under the late H. W. Ellerson who, incidentally, paid us several visits in Sweden. It is quite some time since I had the pleasure of being in the United States—my last visit was in 1932—and I am eagerly looking forward to a reanimation of the contact with my friends in the paper and pulp industry. However, my first task as a delegate of the Swedish Cellulose Association and the Swedish Paper Mills Association will be to go to Canada, the Canadian Pulp and Paper Association having kindly invited me to attend their annual meeting this week."

"We have a very high regard in Sweden for the efficiency and progressive spirit shown by the leaders of the American paper and pulp industries, and the members of our Swedish associations have asked me to convey their cordial greetings to their many friends and colleagues over here," Mr. Hall continued. "We have been deeply impressed by the tremendous development in the paper and paper board production in the United States during the pre-war period. Judging by the concern expressed in the daily papers on account of a reported pulpwood shortage I am sure that the forest products are also at the present time playing almost as important a role here as they are in my own country. As you may know the forest is Sweden's greatest natural asset and the forest industries usually contribute some 50% of the value of our total exports. We depend normally to a very large extent on British coal and American gasoline for our fuel supply and it has been up to the forest industry to try and cope with the situation ever since our shipping facilities from the Western Hemisphere were severed in April 1940."

"After having experienced extremely cold winters and bad summers for three consecutive years our crops became so poor that the cellulose industry almost proved a lifesaver by placing about a million tons of specially made fodder cellulose at the Government's disposal."

Forests Provide Vital Materials

"The result has been that during the war period the forest has become responsible for the Number 1 raw material in practically every field of life; we are heating our houses with wood; we are driving our automobiles with charcoal from the forests; we have been feeding our cattle with wood cellulose; we are packing a good many products in paper sacks which were previously put in jute bags; the farmers now use paper string for their "self binders" as a sub-

(Continued on page 42)

More Federal Forests Opened For Cutting

Government Requests Bids On 150 Acres of Michigan Timber — Several Other Small Private Tracts Are Offered For Pulpwood — Paper Men Elected Officials In Banks — Other Industrial News.

[FROM OUR REGULAR CORRESPONDENT]

APPLETON, Wis., January 24, 1944—Additional acreage in federal forests in upper Michigan has been opened up for selective cutting in order to supply additional pulpwood. Sealed bids have been called for marked timber on 70 acres in Ottawa National Forest, including 320 cords of pulpwood, and are to be submitted by January 31. Another tract on which bids are due February 14 includes 80 acres, with an estimated 100 cords of balsam fir pulpwood and 20 cords of spruce pulpwood. Detailed information may be obtained from U. S. Forest Supervisor, Ironwood, Mich.

Pulpwood also is being offered on a number of private tracts. P. C. Anderson, Spring Brook, Wis., has listed with the State Timber Marketing Committee about one million feet of Norway, jack, white pine, poplar, oak and maple. Arthur Kurtz, 410 Eleventh street, Baraboo, Wis., has 10 acres of popple for pulpwood cutting. Seventy acres of jack pine up to 12 inches in diameter are offered for pulpwood by Ralph Squires, Lake Delton, Wis.

Consolidated Announces Personnel Changes

Personnel changes announced last week by the Consolidated Water Power and Paper Company, Wisconsin Rapids, Wis., include the appointment of James J. Plzak as director of the plastic sales division, and George S. Nelson of Madison, Wis., as safety and claims manager. The latter position formerly was held by Mr. Plzak, and covers all divisions of Consolidated in Wisconsin, according to Leo Barrette, personnel manager.

Mr. Nelson has been employed by the War Production Board in Madison for the last two years, and prior to that time was chief of claims and safety on federal works projects for the government. He is a native of Waupaca, Wis. Mr. Nelson will move to Wisconsin Rapids February 1.

Mr. Plazak will serve a comparatively new department of Consolidated, which has developed Consoweld, a plastic made by laminating paper under pressure to form a sheet material equal in strength to numerous metals, and accepted by the government for airplane parts and other war products.

Paper Men Elected By Banks

D. C. Everest, president and general manager of the Marathon Paper Mills Company, Rothschild, Wis., was elected a director of the Wisconsin Valley Trust Company, Wausau, Wis., at a meeting of stockholders last week. A. P. Woodson, president of the Mosinee Paper Mills Company, Mosinee, was elected chairman of the board, and Norman S. Stone, secretary and general manager of the same company was reelected to the board.

At the annual meeting of the First National Bank, Appleton, Wis., last week, C. B. Clark, president of the Riverside Paper Corporation, Appleton, was reelected vice-president. Among the directors reelected are: Charles S. Boyd, president of the Appleton Coated Paper Company, Appleton; W. E. Buchanan, president of Appleton Wire Works, Appleton; R. H. Purdy, general manager of the Tuttle Press Company, Appleton; F. J. Sensenbrenner, chairman of the board of Kimberly-Clark Corporation, Neenah, Wis.; K. E. Stansbury, president of Thilmany Pulp and Paper Company, Kaukauna, Wis., and John G. Strange, secretary of the Institute of Paper Chemistry, Appleton.

Reelected directors of the Bank of Menasha, Menasha, Wis., include F. E. Sensenbrenner, assistant secretary-treasurer of Kimberly-Clark Corporation, Neenah.

Fine Paper Merchants Elect Head

E. T. Gamsky of the Oshkosh Paper Company, Oshkosh, Wis., was elected president of the Wisconsin Fine Paper Merchants at its annual meeting at Hotel Athearn, Oshkosh, Wednesday, January 19. He formerly was vice-president, and that office was filled by the election of Lester Ramaker, Milwaukee, Wis. Guin Olson, Milwaukee, was reelected secretary, and Charles Oberweiser, Menasha, treasurer. Mr. Gamsky succeeds Lyman Dwight of Milwaukee.

To Distribute A. M. Collins Lines

The Alling & Cory Company, 133-141 West 21st street, New York, announces that it has become one of the distributors in New York City and adjacent territory for the lines of the A. M. Collins Manufacturing Company, Philadelphia, Pa.

The products of this mill have been well and favorably known in the trade since 1852. The lines consist of specialty cover papers, tone coated book papers, card board, translucents and coated tough check, as well as many specialties which require the use of fine coating and embossing equipment.

R. W. Whitney Goes to WPB

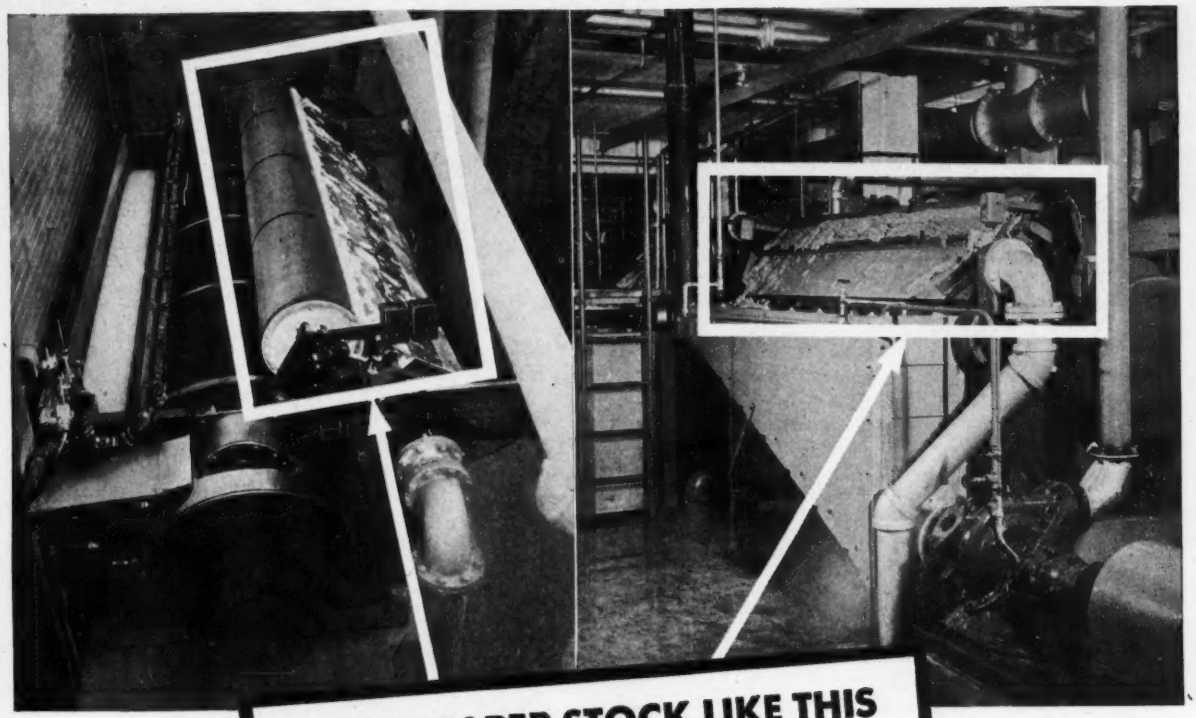
[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., Jan. 26, 1944—The appointment of Russell W. Whitney as a Deputy Director of the Paper Board Division of the War Production Board was announced today by G. G. Otto, director of the division. Mr. Whitney's appointment was effective January 15.

Prior to coming to Washington, Mr. Whitney was vice-president of the Hinde and Dauch Paper Company of Hoboken, N. J. His home is in Montclair, N. J.

J. Frank Cassidy Retires

BEAVER FALLS, N. Y., January 24, 1944—Announcement is made here of the retirement on January 1 of J. Frank Cassidy as superintendent of a pulp mill operated by the J. P. Lewis Company. He was born in Canada but came to this country at an early age. In 1905 he entered the employ of the Lewis concern in the lumbering division and in 1916 he was appointed superintendent of the branch known as the Basselin pulp mill where he has served since.



GOOD PAPER STOCK LIKE THIS

May Be Hard to Get Out of the Woods . . . But It Isn't Hard to Get Out of the Waste Water, When You Operate

BIRD SAVE-ALLS

In many a mill Bird Save-Alls are working night and day to keep every pound of precious fibre *out* of the waste water from the paper machine and get it back *into* good, salable paper.

If you have any questions about the Bird Save-All system or what it can do, *now* would be a good time to get the answers.

BIRD MACHINE COMPANY

SOUTH WALPOLE • MASSACHUSETTS

Tentative Program For "Paper Week"

The American Paper and Pulp Association has just issued the tentative program for its 67th annual meeting. All the meetings of the association, together with the allied associations, will be held February 13-17 at the Waldorf-Astoria Hotel, unless otherwise indicated in the program. The Technical Association of the Pulp and Paper Industry will meet at the Commodore Hotel and its program is printed on page 27 of this week's issue of the PAPER TRADE JOURNAL.

Donald M. Nelson, chairman of the War Production Board, will be the principal speaker at the annual luncheon which will be held in the Grand Ball Room of the Waldorf-Astoria on Monday, February 14, at 1:00 P.M.

Sunday, February 13, 1944

10:00 A.M. The Tissue Association, Roll and Interfolded Toilet Tissue Divisions 4-M.
10:00 A.M. United States Pulp Producers Association, Annual Meeting—Jansen Suite.
1:00 P.M. United States Pulp Producers Association, Annual Luncheon—Jansen Suite.
2:00 P.M. Glassine and Greaseproof Manufacturers Association, Technical Committee—4-F.
2:00 P.M. The Tissue Association, Paper Towel Division—4-M.
2:30 P.M. United States Pulp Producers Association, Annual Meeting, Continued—Jansen Suite.
4:00 P.M. The Tissue Association, Wrapping and Waxing Tissue Division—4-NP.
5:00 P.M. The Tissue Association, Jumbo Roll Division—4-JK.
6:00 P.M. The Tissue Association, Tissue Industry Nominating Committee—4-L.
7:00 P.M. American Paper and Pulp Association, Pulpwood Committee—4-F.
7:00 P.M. The Tissue Association, Board of Governors Dinner—4-M.

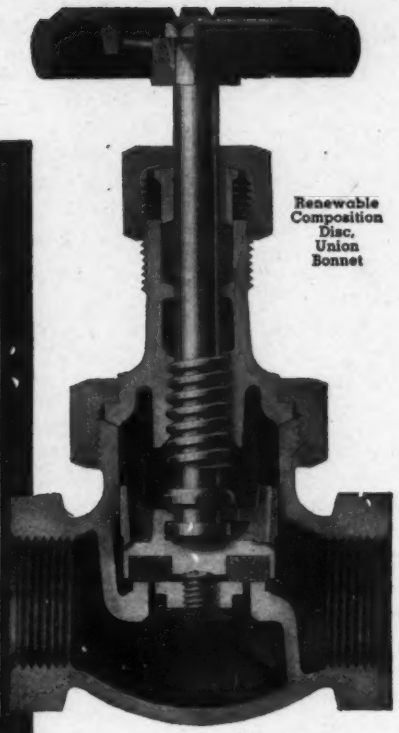
Monday, February 14, 1944

8:00 A.M. American Paper and Pulp Association, Finance Committee, Breakfast—4-F.
9:30 A.M. Sulphite Paper Manufacturers Association, Budget Committee—Crane U.
9:30 A.M. Sulphite Paper Manufacturers Association, Nominating Committee—Crane V.
10:00 A.M. American Paper and Pulp Association, Industrial Relations Committee—4-JK.
10:00 A.M. Blotting Paper Manufacturers Association, Annual Meeting—4-P.
10:00 A.M. Coated and Processed Paper Association, Annual Meeting (Hotel Commodore, Club Suite).
10:00 A.M. The Tissue Association, General Tissue Industry Meeting (All Divisions)—Jansen Suite.
10:00 A.M. Waterproof Paper Group, Annual Meeting—Le Perroquet W.
10:00 A.M. Writing Paper Manufacturers Association, Executive Committee Pillement GH.
10:30 A.M. Groundwood Paper Manufacturers Association, Annual Meeting—Carpenter Salon.
11:00 A.M. American Paper and Pulp Association, War Industry Committee—Le Perroquet Y.
11:00 A.M. Sulphite Paper Manufacturers Association, Board of Governors—Crane V.
12:15 P.M. Coated and Processed Paper Association, Luncheon (Hotel Commodore, Club Suite).
12:30 P.M. Waterproof Paper Group, Annual Luncheon—Le Perroquet X.
1:00 P.M. American Paper and Pulp Association, Annual Luncheon—Grand Ball Room.
1:30 P.M. Waterproof Paper Group, Annual Meeting, Continued—Le Perroquet W.
2:30 P.M. Paper Napkin Association, Inc.—Le Perroquet Y.
3:00 P.M. American Paper and Pulp Association, Industrial Relations Committee, Continued 4-JK.
3:00 P.M. American Paper and Pulp Association, Conservation of Critical Materials Committee—Crane V.
3:00 P.M. American Paper and Pulp Association, Public Relations Committee—Carpenter White.
3:00 P.M. Groundwood Paper Manufacturers Association, Annual Meeting, Continued—Carpenter Salon.
3:00 P.M. Salesmen's Association of the Paper Industry, Executive Committee—4-F.
3:00 P.M. Sulphite Paper Manufacturers Association, Annual Meeting—Jansen Suite.
3:00 P.M. Writing Paper Manufacturers Association, Bristol Board Group Pillement GH.
3:30 P.M. American Paper and Pulp Association, Committee on Instrumentation Research—Crane U.
4:00 P.M. Salesmen's Association of the Paper Industry, Annual Meeting—4-M.
4:00 P.M. The Tissue Association, Meeting of New Board of Governors—4-NP.
6:00 P.M. Sulphite Paper Manufacturers Association, Annual Dinner—Jansen Suite.

Tuesday, February 15, 1944

9:00 A.M. Kraft Paper Association, Inc., Executive Committee, Breakfast—Carpenter White.
9:30 A.M. American Paper and Pulp Association, Forestry Committee—4-F.
9:30 A.M. American Paper and Pulp Association, Technical Committee—Pillement GH.
9:30 A.M. Writing Paper Manufacturers Association, 83rd Annual Meeting Jansen Suite.
10:00 A.M. American Paper and Pulp Association, Traffic Committee—Carpenter Salon.
10:00 A.M. Cardboard Manufacturers Association, General Meeting—Crane V.
10:00 A.M. Newsprint Manufacturers Association of the United States—Le Perroquet W.
10:00 A.M. OPA Tissue Industry Advisory Committee—Le Perroquet X.
10:00 A.M. Sulphite Paper Manufacturers Association, Unbleached and Manila Groups—Le Perroquet Y.
10:30 A.M. American Paper and Pulp Association, Public Affairs Committee—Crane U.

An Occupational Questionnaire for GLOBE VALVES



Renewable Composition Disc, Union Bonnet

Today, when it is more important than ever before to keep pipe lines flowing at maximum efficiency, too much care cannot be given to selecting the right valve for each job. Before you "draft" a valve for that all-important line, make sure it is the type you really need. Here are some hints on GLOBE VALVE selection which may help.

WHEN SHOULD GLOBE VALVES BE USED? Globe and angle valves are preferable to gate valves where the valve is to be operated frequently, because they open with fewer turns; and also where the valve is to be operated partially open, as on throttling service. They are not suitable where complete drainage of the pipe must be provided.

WHAT ARE THE ADVANTAGES OF ANGLE VALVES? Because of the basic similarity in operating mechanism, angle valves and globe valves are generally classed together. The use of angle valves saves an elbow and nipple and also reduces the pressure loss.

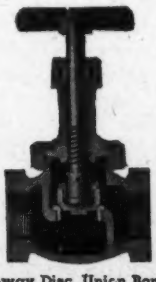
WHEN SHOULD COMPOSITION DISCS BE SPECIFIED? Globe and angle valves with composition discs are suitable for services other than high temperature. While these discs do not last as long as metal ones on throttling service, they increase the life of the seat by taking most of the wear of wire drawing, and are easier and cheaper to renew.

FOR WHAT SERVICES ARE METAL DISCS PREFERABLE? Metal discs in globe and angle valves last longer than composition discs on throttling and high temperature service.

WHEN SHOULD PLUG-TYPE DISCS BE USED? Globe and angle valves with plug-type discs are the best valves for throttling service.

WHAT ARE THE ADVANTAGES OF UNION BONNETS? Union bonnets are desirable when valves may require frequent repair or replacement of disc. This type of connection minimizes the danger of distorting the body or bonnet when reassembling the valve after repairing.

Bronze Disc, Screwed Bonnet



Full-way Disc, Union Bonnet Renewable Seat Ring

Regrinding Disc, Union Bonnet

Plug-type Disc, Union Bonnet Renewable Seat Ring

If you have a valve selection problem, write to us...we will be glad to make recommendations based on 65 years of experience building valves. And, you can be sure of receiving unbiased help, because Kennedy makes all kinds of standard gate, globe, angle and check valves. For full description of Kennedy valves, pipe fittings and fire hydrants, send for 240-page catalog.

KENNEDY VALVES • PIPE FITTINGS • FIRE HYDRANTS
THE KENNEDY VALVE MFG. CO. • ELMIRA, N.Y.

11:00 A.M. Cardboard Manufacturers Association, Tag Group—Crane V.
11:30 A.M. Cardboard Manufacturers Association, Coated Blanks Group—Crane V.
12:00 A.M. Cardboard Manufacturers Association, Photomount Group—Crane V.
12:30 P.M. Salesmen's Association of the Paper Industry, Annual Luncheon—Grand Ball Room.
2:30 P.M. American Paper and Pulp Association, Forest Industries Information Committee —Crane V.
2:30 P.M. OPA Tissue Industry Advisory Committee—Le Perroquet X.
2:30 P.M. National Council for Stream Improvement, Inc., Board of Governors—Jansen Suite.
3:00 P.M. American Paper and Pulp Association, Biological Control Committee Crane U.
3:00 P.M. Sulphite Paper Manufacturers Association, Bleached Group—Le Perroquet Y.
3:30 P.M. National Council for Stream Improvement, Inc., General Meeting—Jansen Suite.
4:30 P.M. American Paper and Pulp Association, Forest Industries Council—Le Perroquet W.
4:30 P.M. National Council for Stream Improvement, Inc., New Board of Governors—Jansen Suite.
4:30 P.M. Sulphite Paper Manufacturers Association, Machine Glazed Group—Suite Parlor.
6:00 P.M. Glassine and Greaseproof Manufacturers Association, Executive Committee Dinner Meeting—Pillement GH.

Wednesday, February 16, 1944

8:00 A.M. American Paper and Pulp Association, Executive Committee, Breakfast—Carpenter White.
10:00 A.M. American Paper and Pulp Association, Executive Committee and Board of Governors, Joint Meeting—Carpenter Salon.
10:00 A.M. American Pulpwood Association, Annual Meeting—4-LM.
10:00 A.M. OPA Tissue Industry Advisory Committee—Le Perroquet Y.
10:00 A.M. Waxed Paper Institute, Inc.—Jansen Suite.
10:00 A.M. Writing Paper Manufacturers Association, Cover Paper Group Carpenter White.
10:30 A.M. Glassine aand Greaseproof Manufacturers Association, Annual Meeting—Pillement GH.
10:30 A.M. Specialty Paper and Board Affiliates, General Meeting—Le Perroquet W.
11:30 P.M. Specialty Paper and Board Affiliates, General Meeting—Le Perroquet W.
12:30 P.M. Kraft Paper Association, Inc., Luncheon —Palm Room.
12:30 P.M. Glassine and Greaseproof Manufacturers Association, Luncheon—4-F.
1:00 P.M. Specialty Paper and Board Affiliates and Cardboard Manufacturers Association, Luncheon—Le Perroquet X.
1:00 P.M. Waxed Paper Institute, Inc., Executive Committee, Luncheon—Crane V.
1:00 P.M. Writing Paper Manufacturers Association, Thin Paper Group, Luncheon—Carpenter White.
2:00 P.M. American Pulpwood Association, Annual Meeting Continued—4-LM.
2:30 P.M. Kraft Paper Association, Inc., Annual Meeting—Palm Room.
2:30 P.M. The Tissue Association, Sanitary Absorbent Tissue Division—4-JK.
3:00 P.M. American Paper and Pulp Association, Open Meeting on Pulp and Paper Controls—Jade Room.
3:00 P.M. Association of Pulp Consumers—Jansen Suite.
3:30 P.M. Sulphite Paper Manufacturers Association, Bleached Kraft Group—Pillement GH.
4:30 P.M. Sulphite Paper Manufacturers Association, Treated Butchers Group—Pillement GH.
6:00 P.M. Waxed Paper Institute, Inc., Dinner—Le Perroquet X.
7:00 P.M. American Pulpwood Association—Dinner —4-LM.
7:00 P.M. The Paper Club of New York Dinner—Grand Ball Room.

Thursday, February 17, 1944

9:00 A.M. Vegetable Parchment Manufacturers Association, Annual Meeting, Breakfast Suite Parlor.
10:00 A.M. American Pulpwood Association, Directors Meeting—4-NP.
10:00 A.M. The Tissue Association, Gift Wrapping Tissue Division—4-M.

D. T. Daily Made Industrial Agent

[FROM OUR REGULAR CORRESPONDENT]

NORFOLK, Va., January 24, 1944—The appointment of Dallas T. Daily as general industrial agent of the Seaboard Air Line Railway was announced today by G. B. Rice, chief freight traffic officer of the Seaboard. Mr. Daily succeeds Warren T. White, who was recently promoted to the position of Special Assistant to the Receivers.

In making the announcement Mr. Rice stated that Mr. Daily, now assistant general industrial agent, because of his education, personality and experience in many phases of railroad work, is especially qualified to assume the duties of the head of the industrial department.

Richard Jennings Dead

Oliver United Filters Inc., 33 West 42nd street, New York, N. Y. announces with deep regret the death of Richard Jennings, one of its field engineers, on January 23 at Lawrence, Mass. Mr. Jennings, who joined the organization in 1927, had just completed some test work on filters in a paper mill when stricken with a cerebral hemorrhage. He is survived by a wife and two children who, at the time of his death, were at the family home in Brunswick, Ga.

G. B. Hall Returns to Morey Co.

G. Bancroft Hall, who has just been released from war training service, in which capacity he acted as civilian flight instructor for the Navy, is now back at his old position as salesman for the Morey Paper Mill Supply Company, 309 South street, Fitchburg, Mass.

IS PERFORMING DISTINGUISHED SERVICE

If ever a chemical deserved a military medal, it's chlorine! It is always with the advance spearhead of attack . . . Its compounds land with the first invasion troops . . . Serving on duty everywhere in the field during every campaign—fighting the battle against water-borne disease.

Chlorine and its compounds serve both the army and the navy from the time a man enters the service until he's mustered out. Chlorine's most important function is the protection of drinking water. But it's also used by the medical corps as a bactericide. It's a bleach and sanitizing agent in camp laundries. And, in footbaths it guards against common infections.

All this is vitally important—and to this service Penn Salt devotes a large percentage of its output of chlorine and chlorine compounds. With facilities expanded and service augmented by this wartime experience, Penn Salt is now equipped to serve you better when peace returns.

Penn Salt manufactures
Liquid Chlorine
for the Paper and Pulp Industry
ALSO: Caustic Soda • Sodium Aluminate
Bleaching Powder • Corrosion-Proof Cements • Alum
Anhydrous and Aqua Ammonia • Acids • Perchloron*
*Trade-mark Reg. U. S. Pat. Off.

PENNSYLVANIA SALT
MANUFACTURING COMPANY
Chemicals
1000 WIDENER BUILDING, PHILADELPHIA 7, PA.
NEW YORK • CHICAGO • ST. LOUIS • PITTSBURGH • MINNEAPOLIS • WYANDOTTE • TACOMA

N. E. Scott Goes with WPB

BOSTON, Mass., January 24, 1944—Norman E. Scott, who has had an executive position with the New England Division of the War Production Board in the Priorities Department about a year and a half, has been appointed Regional Chief of the Paper and Paper Products Unit of the Forest Production Section of WPB for New England. The Forest Production Bureau was set up to solve the problems on the shortage of lumber, paper, and paper products. Mr. Scott, since graduation from college, has been engaged in the paper industry.

Coated Paper Men to Meet

The annual meeting of the Coated and Processed Paper Association will be held in the Club Suite of the Hotel Commodore, New York City on Monday morning, February 14, at 10:00 o'clock. The agenda will include reports of the committee chairmen and the treasurer together with the election of officers. In addition to this there will be a discussion of general and specific plans pertaining to the period of conversion of the industry to peace-time products.

The general theme of the discussion during the annual luncheon which will follow the meeting will be "Post-War Trends in the Paper Converters Industry." Following the luncheon, the newly elected Executive Committee will hold its annual meeting.

The present executive committee of the Association include: John N. Hazen of the Hazen Paper Company, Holyoke, Mass., president; James T. Cronk of the Hampden Glazed Paper and Card Company of Holyoke, Mass., vice president; Charles H. Hoffman of Hughes & Hoffman Company of New York City, vice president; and Samuel Lachman of the Lachman-Novasel Paper Company of New York City, Ralph H. Laue of Bradner Smith & Co., Chicago, Ill.; William B. Snow of Middlesex Product Corporation, Cambridge, Mass., and Arthur R. Walsh of Walther & Co., Inc., of Brooklyn, N. Y. Arthur A. Thomas is the executive director of the Coated and Processed Paper Association with headquarters in Providence, R. I.

Maine Alumni to Meet

The fourteenth annual "Paper Week" luncheon of the Alumni of Maine and friends will be held at the South Room of the Commodore Hotel, New York, Tuesday, February 15, 1944 at 12:45 P.M. It should be noted that the luncheon this year will be held on Tuesday and not on Wednesday as heretofore. The gathering will be informal and all Maine men are urged to attend. Reservations may be made by writing to John D. Dickson, Jr., 439 Portage street, Kalamazoo, 6, Mich.

C. E. Kinne Reported Improving

WATERTOWN, N. Y., Jan. 24, 1944—Clarence E. Kinne, formerly president of the Bagley & Sewall Company, is reported recovering from a slight thrombosis he suffered at his home here. He has been confined to bed since he was taken ill but his condition is said to be improving. He is president of the local Building and Loan Association and will be 75 years old in the spring.

We're in it for the duration

SINCE 1828
We have served the industry well, with the finest in Paper Mill Machinery.
NOW
our entire manufacturing facilities are engaged in turning out material for the mightiest and most formidable fighting machine our country has ever known.
While we cannot give you typical peacetime SW Service, we can supply you with replacements — under proper priority rating, of course.

THE SMITH & WINCHESTER
MANUFACTURING COMPANY
PLANT AND OFFICES AT SOUTH WINDHAM, CONNECTICUT

LOOK FOR THIS MARK of QUALITY ON Felts

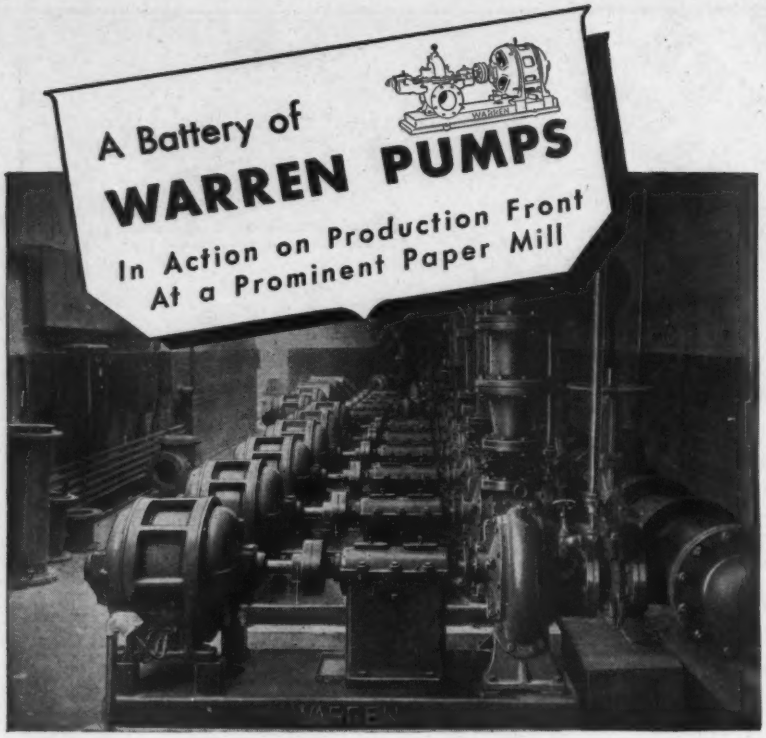
Appleton Felts MAKE GOOD PAPER

APPLETON WOOLEN MILLS
APPLETON, WIS.

PULP

Perkins-Goodwin Co.
ESTABLISHED 1848
30 ROCKEFELLER PLAZA · NEW YORK
CHICAGO OFFICE: CHICAGO DAILY NEWS BLDG.

PAPER



And, like the men, women and equipment in all branches of the armed forces, these pumps are giving a good account of themselves. They stick with their jobs, through thick and thin, at remarkably low operating and maintenance costs. This goes for Warren Stock Pumps, Machine Chest Pumps, Liquor Pumps and Fresh Water Pumps. In other words, for low pumping costs on all Paper Mill services, specify:

WARREN PUMPS

WARREN STEAM PUMP COMPANY, INC.
WARREN, MASSACHUSETTS

Porter Enlarges Office in New York City

The opening of an enlarged New York and export office at 50 Church Street, New York, N. Y., made necessary to accommodate rapid expansion of its business, has been announced by H. K. Porter Company, Inc., Pittsburgh, Pa.

The new office just being opened on Church Street will serve as an Eastern center for the company's entire line of locomotives, process equipment and pumps.

Thomas MacLachlan has been named general manager in charge, and is also directly handling locomotive sales and service for the entire Eastern seaboard.

Mr. MacLachlan was formerly New York manager of Vulcan Iron Works of Wilkes-Barre, Pa., a position he had held since shortly after the close of World War I, in which he served as a First Lieutenant, Infantry.

R. G. Newell, who managed the New York office of Quimby Pump Company, before its acquisition by Porter, is directing activities of Porter's Quimby Pump Division in New England and the New York district, from the new office.

Earl M. Bardo, formerly with Robinson Manufacturing Company, is headquartered in the same office, representing Porter chemical process equipment for the same territory. The company's export department also has been housed at the 50 Church street address.

Additional district and regional offices are in process of being established throughout the country, W. W. Calihan, Porter general sales director, said in making this announcement.

Appoint Tag Committee To Advise Industry

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., January 26, 1944 — Twelve representatives of concerns which make tags, pin tickets and marking machine tickets were appointed to an industry advisory committee today by the Office of Price Administration.

The committee will hold an organization meeting at 10 A.M., February 15 at OPA's regional office in New York City to determine plans for future consultations with OPA officials on problems connected with their industry.

The new committee is comprised of: R. A. Maish, director, Dennison Manufacturing Company, Framingham, Mass.; W. C. Bailey, Jr., president, Reyburn Manufacturing Company, Inc., Philadelphia, Pa.; C. H. Padmore, secretary-treasurer, The Denney Tag Company, West Chester, Pa.; Howard W. Eastman, president, Eastman Tag and Label Company, San Francisco, Calif.; A. C. Shennan, vice president, International Tag and Salesbook Company, Chicago, Ill.; Floyd Wrightsman, vice president, Haywood Tag Company, Lafayette, Ind.; A. E. Ratheiser, sales director, Monarch Marking System Company, Dayton, Ohio; C. A. Bischoff, manager, Cupples-Hesse Corporation, St. Louis, Mo.; Lloyd Price, secretary, Robinson Tag and Label Company, New York City; I. C. Foss, president, National Tag and Label Corporation, Cambridge, Mass.; H. C. McElroy, secretary, Ennis Tag and Salesbook Company, Ennis, Texas; G. E. Phelps, Treasurer, Allen-Bailey Tag Company, Inc., New York City.

FINANCIAL NEWS

New York Stock Exchange

High, Low and Last for Week Ending January 22, 1944

STOCKS

	High	Low	Last
A. P. W.	2½	2½	2½
Armstrong Cork Co.	39¾	38⅞	39½
Celotex Corp.	12	11½	12
Celotex Corp., pf.	17½	17	17½
Certain-Teed Products Corp.	5¾	5	5¾
Certain-Teed Products Corp., pf.	61¾	57½	61¾
Champion Paper & Fibre Co.	27⅜	25	27¼
Champion Paper & Fibre Co., pf.	110¼	109½	110¼
Congoleum Nairn Co.	22⅞	22⅛	22⅛
Container Corp. of America	21¾	20½	20½
Continental-Diamond Fibre Co.	12	11⅝	11⅝
Crown-Zellerbach Co.	16⅞	15⅞	16⅞
Crown-Zellerbach Co., pf.	99	97⅛	97⅛
Dixie Cup Co.	15⅞	15½	15⅝
Dixie Cup Co., A.	44¾	44¼	44⅜
Flintkote Co.	20⅜	19⅝	20¼
Flintkote Co., pf.	105	105	105
Robert Gair	3⅛	3	3⅛
Robert Gair, pf.	15¾	14½	15¾
International Paper Co.	14½	13⅜	14½
International Paper Co., pf.	69¾	67⅜	68½
Johns-Manville Corp.	91	89	90½
Johns-Manville Corp., pf.	128¾	128	128¾
Kimberly-Clark Corp.	32	32	32
MacAndrews & Forbes	27½	27	27⅜
MacAndrews & Forbes, pf.	138	138	138
Masonite Corp.	40	38¾	39¾
Mead Corp.	9⅛	8¾	9
Mead Corp., pf. A—6%	85	85	85
Mead Corp., pf. B—5½%	73	70	72
National Container Corp.	12⅜	12¼	12¾
Paraffine Companies, Inc.	49½	47⅜	47⅜
Paraffine Companies, Inc., pf.	....	....	....
Rayonier, Inc.	13½	13¼	13¼
Rayonier, Inc., pf.	29⅞	29¾	29¾
Ruberoid Co.	27	26½	27
Scott Paper Co.	40	39⅛	40
Scott Paper Co., pf.	111	110	110
Sutherland Paper Co.	31	31	31
Union Bag & Paper Corp.	10¼	9⅝	9¾
United Paperboard Co.	4¼	4¼	4¼
U. S. Gypsum Co.	74	72¾	73¾
U. S. Gypsum Co., pf.	171	171	171
West Virginia Pulp & Paper Co.	19¾	18⅝	18⅝
West Virginia Pulp & Paper Co., pf.	106⅛	106⅛	106⅛

BONDS

Abitibi Pulp & Paper Co. 5s '53	74½	74	74
Celotex Corp. 3¾s '55	102	102	102
Certain-Teed Products Corp., 5½s '48	101¼	100	100⅛
Champion Paper & Fibre Co. 4¾s '50	....	....	....
International Paper Co. 6s '55	108¼	108	108¼
International Paper Co. 5s '47	104⅞	104⅛	104⅛
Mead Corp. 3½s '53	....	....	....
West Virginia Pulp & Paper Co. 3s '54	....	....	....

New York Curb Exchange

High, Low and Last for Week Ending January 22, 1944

STOCKS

	High	Low	Last
Great Northern Paper Co.	32	31¼	32
Hummel-Ross Fibre Corp.	4⅝	4⅜	4⅜
St. Regis Paper Co.	4⅜	4¼	4⅜
St. Regis Paper Co., pf.	146	146	146
Taggart Corp.	....	....	....

BONDS

American Writing Paper Co. 6s '61	99¾	99¾	99¾

L. B. Norstrand to Assist Rex Hovey

Rex W. Hovey, director of the Paper Division of the Forest Products Bureau, War Production Board, Washington, D. C., has announced the appointment of Leif B. Norstrand of Scarsdale, N. Y., as consultant on paper production, acting as special assistant to Mr. Hovey.

Mr. Norstrand entered the paper industry twenty years ago after graduating from Dartmouth College, joining his father, H. P. G. Norstrand in his mills in Plattsburg, N. Y., the Saranac Pulp and Paper Company, and the Norstrand Manufacturing Company. Later he spent some years with Johaneson, Wales & Sparre, Inc., and Cellulose Sales Company, wood pulp importers of New York City.

A year ago he joined the Westfield River Paper Company, Inc., glassine paper manufacturers, which recently elected him vice-president.

LET US HELP YOU

WITH YOUR PIPING DESIGNS

Whether it's for urgent wartime repairs or the peace-job ahead, ARMCO Spiral Welded Steel Pipe is always designed to *fit your layout.* Every foot of "Spiral Welded" is prefabricated (including fittings that are welded to straight pipe runs).

No doubt your mill is "shooting the works" in production now. This means your equipment and properties may need many changes when you swing back to normal business. These are the job-giving peacetime projects *you can plan now.*

Design With Spiral Welded

Before your detailed plans are ready we should like to discuss with you the *right design* of your piping systems with ARMCO Spiral Welded Steel Pipe—how this will assure economical and efficient operation. And we'd like to tell you about the many practical advantages of this steel pipe.

Meanwhile it will pay you to read an article on "Outline of Design Factors for Steel Water Pipe Lines." It was written especially to show the advantages of specific design for water supply lines. Write for a copy. It's free.

The American Rolling Mill Company,
861 Curtis Street, Middletown, Ohio.

EXPORT: THE ARMCO INTERNATIONAL CORPORATION.

ARMCO

ARMCO SPIRAL WELDED PIPE

PAPER TRADE JOURNAL

Title Reg. U. S. Pat. Off

Henry J. Berger
EDITOR

Vol. 118 January 27, 1944 No. 4

COMING EVENTS IN PAPER INDUSTRY

American Paper and Pulp Association, Sixty-seventh Annual Convention and meeting, Waldorf-Astoria Hotel, New York, February 14-18.

Technical Association of the Pulp and Paper Industry, Convention, Commodore Hotel, New York, February 14-17.

National Paper Trade Association of the United States, Convention, Waldorf-Astoria Hotel, New York, February 14-17.

The New York Association Of Dealers In Paper Mills' Supplies, Annual Banquet, Commodore Hotel, New York, Tuesday, February 15.

New England Section. Technical Association of the Pulp and Paper Industry—Third Friday of each month at the Roger Smith Hotel, Holyoke, Mass.

Delaware Valley Section. Technical Association of the Pulp and Paper Industry—First Friday of each month at the Engineers Club, Philadelphia, Pa.

Lake States Section. Technical Association of the Pulp and Paper Industry—Second Tuesday of each month at the Conway Hotel, Appleton, Wis.

Kalamazoo Valley Section. Technical Association of the Pulp and Paper Industry—First Thursday of each month at the Park, American Hotel, Kalamazoo, Mich.

RECONVERSION

Reconversion of industry to the post war period will depend greatly upon a realistic and rational Federal policy. The paper industry and all other major industries have established remarkable records in supplying the huge and diversified needs of the war. Great advances in manufacturing goods at an accelerated rate and at lower cost have been made. American industry is, therefore far better equipped than ever before to begin a constructive period that will bring a larger measure of prosperity than in the past. But industry cannot accomplish all that it is able to perform unless the Federal Government makes it possible. A high level of employment can only be assured if industry is permitted to carry out its own essential business plans. Meddling and doubtful social objectives and half-baked economic theories must be discarded. The government must adopt a program of economy in its departments and personnel. The greatly inflated government payroll must be reduced. The national stage must be cleared and prepared for a new era.

Emphasing that business cannot make definite post war plans until it knows "what the rules are going to be when the game starts", Lewis H. Brown, president of the Johns-Manville Corporation, in an address on January 11 before the Sales Executives Club of New York, declared: "The first step after Germany is defeated is for the new administration and the new Congress to announce clearly that we are not going to continue a war economy after the war is over. Private enterprise must continue to go forward with confidence, assured that government will proceed at once to remove every obstacle and to offer every reasonable inducement to the building of new productive equipment which will provide employment and eventually raise the standard of living. Such assurance by the government, will enable industry, labor, agriculture and government to cooperatively bring about a program that will encourage the expansion necessary to meet our post-war needs. In building such a program we must profit from past experience and guard against inconsistencies in economic policies which can allow taxes to fall too largely on venture capital and on incomes derived from daring and innovation, thus drying up a major source of employment—policies which encourage monopolistic practices that restrain free competition; policies which allow strong pressure groups to force wages or prices too high for full employment."

Predicting permanently higher prices and higher wages in the post-war period, Mr. Brown declared: "The tendency for wages, once having risen, to maintain the new level has been demonstrated in this country for over a hundred years. Since wages and salaries in manufacturing make up 80% of costs, high money wages in a free economy must inevitably result in higher prices in terms of money. I think, however, that there will be a relative decline in prices of manufactured products, relative, that is, to wages and costs."

Citing the development of new knowledge and new skill in the field of distribution as the great challenge in the post war future, Mr. Brown warned that "we must sell a lot more per capita in 1949 than in 1929, if we are to keep our vast production facilities going. In 1929 we had a national income of $83 billion. Various estimates have been made of the national income at 1929 prices required to prevent dangerous unemployment after the war. . . . We know that, partly owing to the growing population and party because of our greater efficiency of production, we must considerably increase our output of goods and service over pre-war levels if large-scale unemployment is to be avoided. Let us assume that the required increase in 1949, as compared to 1929, is 50%. In other words, in dollars of 1929 purchasing power the value of production would have to reach about $125 billion, regardless of the actual number of 1949 dollars it would be worth. This would mean an increase, not in spending power but in the quantity of goods and services produced per capita, amounting to 28% for every man, woman and child in the United States. That is why I say that our selling organizations are going to have to sell at lot more goods than in the past. That, of course, is what we want to do. That is how the standard of living is raised. That is how unemployment is prevented.

Quoting from a recent report to the Association of National Advertisers by Dr. Henry C. Link, Mr. Brown said: "We have been hearing a lot about

'production for use instead of for profit'. In recent years this has become the slogan of academic economists, social reformers, and other Utopians—Production for what use? And by whom? The airplane is not exactly a novelty, but our recent social survey . . . shows that, though 72% of city men and women have not yet flown, 44% of those who have never flown do not even now want to take a trip by air. This proportion is even higher among farmers. In short, production does not insure use."

In concluding his remarks Mr. Brown recited the challenge which this represents for advertising and selling specialists: "This is to me, a very significant statement. It puts a finger on the weak spot of the contention heard so frequently in Washington these past ten years that advertising and sales promotion is an unnecessary expense which in a 'planned economy' ought to be eliminated. Moreover, it gives some insight into the huge sales, advertising and promotional job that must be done in the post-war years. The progress already made in raising our living standards to the highest in the world can be largely attributed to our sales and distribution methods. However, there are many new frontiers to be crossed."

Alfred T. Carter Transferred to New York

[FROM OUR REGULAR CORRESPONDENT]

BOSTON, Mass., January 24, 1944—Alfred T. Carter, who for the last thirteen years has been New England sales manager for the Pejepscot Paper Company, has been transferred to the sales staff in the New York office. At the present time, he is in New York and Boston in alternate weeks.

Production Ratio Report*

(Production as per cent of six-day capacity)

COMPARATIVE WEEKLY SUMMARIES

Current Weeks—1943		Corresponding Weeks—1942	
December 11	89.6	December 12	88.4
December 18	89.1	December 19	87.9
December 25	70.0	December 26	63.3
January 1, 1944	72.1	January 2, 1943	75.9
January 8 (Revised)	91.7	January 9	85.7
January 15	*91.2*	January 16	88.1

COMPARATIVE MONTHLY SUMMARIES

Year	Jan.	Feb.	Mar.	Apr.	May	June	July
1942	104.5	103.9	102.9	100.4	95.3	87.4	75.8
1943	87.2	88.9	89.5	88.7	91.4	86.4	84.4

Year	Aug.	Sept.	Oct.	Nov.	Dec.	Year Avg.
1942	80.8	82.8	90.6	86.9	80.1	90.4
1943	91.1	88.3	90.2	90.6	*82.8*	87.8

COMPARATIVE YEARLY SUMMARIES

	1936	1937	1938	1939	1940	1941	1942	1943
Year Average..	80.4	79.8	71.5	83.4	85.6	97.4	90.4	*88.2*

* Based on tonnage reported to American Paper and Pulp Association. Does not include mills reporting to National Paperboard Association, except in isolated cases where both paper and paperboard are produced and separate tonnage figures are not readily available. Does not include mills producing newsprint exclusively.

PAPERBOARD OPERATING RATIOS†

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year Avg.
1937	83	89	89	91	88	80	69	77	72	70	57	47	75
1938	56	63	63	60	60	59	59	60	70	73	67	61	64
1939	65	73	76	74	69	73	68	77	82	91	88	77	77
1940	78	75	74	76	82	85	77	79	78	85	82	77	78
1941	81	88	89	89	91	94	92	98	95	99	98	90	92
1942	102	101	101	95	82	72	68	75	76	81	82	77	84
1943	86	88	94	94	96	94	89	96	94	94	93	*87*	93

Week ending Dec. 11, 1943—96 Week ending Jan. 1, 1944—63
Week ending Dec. 18, 1943—96 Week ending Jan. 8, 1944—86
Week ending Dec. 25, 1943—87 Week ending Jan. 15, 1944—*93*

† Per cents of operation based on "Inch-Hours" reported to the National Paperboard Assn.

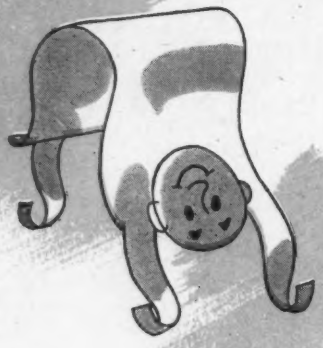
EXPORTERS
OF AMERICAN PULP

TO
BRITAIN
SOUTH AMERICA
AND ALL WORLD MARKETS

LYDDON
& COMPANY
(AMERICA) INC.

51 EAST 42ND STREET
NEW YORK CITY

IMPROVE *Paper Pliability* WITH WAX SIZES



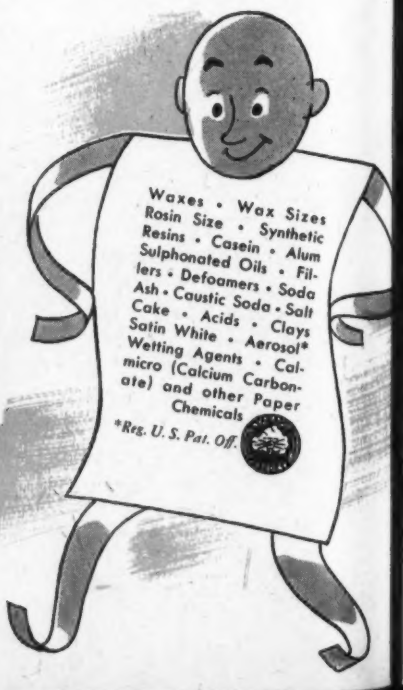
To bring pliability to paper it is often necessary to modify customary sizing formulations if insufficient flexibility is attained when rosin size alone is used. It has been well established through practice that improved pliability characteristics may be attained without sacrifice of strength or water resistance by the addition of a wax size in the proper proportions. Wax sizes reduce the tendencies of paper to crack and break as a result of loss in moisture content . . . an especially important advantage in cold weather when indoor humidities are often low.

Pliability is needed . . . for flexibility and water resistance in hanging papers . . . for resistance to the scratch of the pen and spread of the ink in writing papers . . . for protection from water at the folded edges and corners of paper board . . . for improved creasing, scoring, folding and crimping. Wax size is frequently the answer to such problems when dealing with hard pulps such as Kraft. All these requirements, and more, may be met by the inclusion of wax in sizing formulations. In accomplishing these results it is not necessary to add large quantities of wax size...one to two tenths of 1% of wax is sufficient to secure appreciable improvement and when properly formulated strength characteristics are not impaired.

If you have a technical problem concerning pliability Cyanamid will be glad to assist in determining the proper grade and percentage of wax size required in relation to the particular paper and methods of mill operation. Backed by Cyanamid laboratory research, Cyanamid paper technicians are developing means and methods of improving the manufacture and broadening the usefulness of paper and paper products. We will be pleased to consult with you on your paper and packaging problems.

Box boards and die pressed products handle and shape more readily by the use of wax as a plasticizer in the sizing operation, which gives greater water resistance at folded edges and corners.

Use of wax in sizes makes writing surfaces more resistant to pen and ink, and is particularly useful for envelope papers that should fold smoothly without cracks.


Waxes • Wax Sizes
Rosin Size • Synthetic Resins • Casein • Alum
Sulphonated Oils • Fillers • Defoamers • Soda Ash • Caustic Soda • Salt Cake • Acids • Clays
Satin White • Aerosol* Wetting Agents • Calmicro (Calcium Carbonate) and other Paper Chemicals
*Reg. U. S. Pat. Off.

American Cyanamid & Chemical Corporation

(A Unit of American Cyanamid Company)

30 ROCKEFELLER PLAZA • NEW YORK 20, N. Y.

DISTRICT OFFICES: Boston, Massachusetts; Philadelphia, Pa.; Baltimore, Maryland; Charlotte, North Carolina; Cleveland, Ohio; Chicago, Illinois; Kalamazoo, Michigan; Detroit, Michigan; St. Louis, Missouri; Azusa, California

Section of the
TECHNICAL ASSOCIATION
OF THE PULP & PAPER INDUSTRY
122 E. 42nd St., New York 17, N. Y.
Edited by R. G. Macdonald, Secretary

Tentative Program for Annual Meeting

Technical Association of the Pulp and Paper Industry

Commodore Hotel, New York, N. Y., February 14-17, 1944

MONDAY, FEBRUARY 14, 1944

10:00 A. M. GENERAL SESSION (Grand Ball Room)

R. A. HAYWARD, President, Chairman

1. *Secretary's Report.*
2. *President's Address.*
3. *Tellers Report.*
4. *Joint Textbook Committee Report.*
5. *Post War Planning—An Engineer's Interpretation,* by Milton Jacobs, Chas. T. Main Co.
6. *Post War Implications Affecting the Paper Industry,* by Maurice Deutsch, Consulting Engineer.
7. *Patents in the Post War World* by C. W. Rivise, Caesar & Rivise, Attorneys.
8. *Wage Incentives* by Douglas J. Sterling, Consulting Engineer, (By title).
9. *Post War Cost Reductions* by Sanford E. Thompson, The Thompson & Lichtner Co.

2:00 P. M. VISCOSITY TESTING METHODS SESSION (West Ball Room)

R. S. HATCH, Weyerhaeuser Timber Co., Chairman

1. *Viscosity and Molecular Weight (III. The Heterogeneity of Coefficient) (IV. Acid and Basic Factors)* by Sidney Coppick, New York State College of Forestry.
2. *Rapid Cupriethylenediamine Viscosity Method for Control Work,* by R. M. Levy, P. Muffat, and W. D. Harrison, Ecusta Paper Co.
3. *The Nature of the Cupriethylenediamine Cellulose Solvent,* by R. M. Levy and P. Muffat. (By title)
4. *The Cupriethylenediamine Viscosity Method as a Control in the Manufacture of Pulps of Specified Viscosity,* by E. P. Wood, Weyerhaeuser Timber Co.
5. *The Relationship Between Cellulose Viscosities Measured by the TAPPI Standard and the Cupriethylenediamine Method,* by Alfred J. Corey, Fraser Companies, Ltd.

2:00 P. M. STRAW SUPPLY AND TECHNOLOGY SESSION (Room B-C)

PIERRE DREWSEN, Hinde & Dauch Paper Co., Chairman

1. *Round Table Discussion of the Present Straw Supply and Its Relation to the Technology of Nine Point Corrugating.*

2:00 P. M. PREPARATION OF NONFIBROUS MATERIALS SESSION (East Ball Room)

C. M. CONNOR, Valley Forge Laboratories, Chairman

1. *Special Processes for Coloring Paper,* by H. A. Lips, E. I. du Pont de Nemours Co.
2. *The Role of Alumina in the Mechanism of Rosin Sizing* by John C. Redd, The Mead Corp.
3. *The Alumina Content of Rosin-Free Handsheets in Relation to Tub Sizing* by B. W. Rowland, Inst. of Paper Chemistry, and James J. Harrison, Ohio Box Board Co.
4. *Effect of Pulp Cation-Exchange Capacity of Engine Sizing* by William S. Wilson, Merrimac Div., Monsanto Chemical Co.
5. *Diatomaceous Pigment in White Patent Coated Solid Manila Board* by W. R. Monette, Dicalite Co.

TUESDAY, FEBRUARY 15, 1944

9:30 A. M. PAPERMAKING SESSION (East Ball Room)

A. E. BACHMANN, Missisquoi Corp., Chairman

1. *Round Table Discussion: Review and Comparison of various pulp testing methods for freeness, physical and chemical characteristics. Their significance and interpretation in terms of various paper properties and essential differences among pulps and prepared stocks in their ability to produce these paper properties at varying drying rates.*

9:30 A. M. ACID PULPING SESSION (Room B-C)

GEORGE H. MCGREGOR, Forest Products Laboratory, Chairman

1. *Blowpit Consistency Control* by J. N. Swarr and R. D. Cowherd, The Bristol Co.
2. *Limits of Effect of Acid Concentration-Pressure Relation in Sulphite Pulping* by W. F. Holzer, Crown Zellerbach Corp.
3. *Controlled Hydraulics on Felt Screens for Increased Pulp Production and Quality* by H. F. Schenk, William A. Hardy & Sons Co.
4. *Round Table Discussion of Pulp Yields.*

Note: Those attending this session will probably be interested in the Wood Utilization Round Table in the Alkaline Pulping Session, Tuesday afternoon.

9:30 A. M. GRAPHIC ARTS SESSION (West Ball Room)

M. S. KANTROWITZ, Government Printing Office, Chairman

1. *Reducing Pressroom Waste by Supplies Inspection,* by Jack Beierwaltes, E. J. Kelly Co.
2. *Luminescent Pigments* by G. F. A. Stutz, New Jersey Zinc Co.
3. *Printing of Fluorescent Maps and Charts* by Lt. Commander Paul A. Smith, Coast and Geodetic Survey.
4. *Substitution Products in the Manufacture of Printing Inks* by G. L. Erikson, Protective Coating and Materials Section, W.P.B.

2:00 P. M. PAPERMAKING SESSION (East Ball Room)

A. E. BACHMANN, Missisquoi Corp., Chairman

1. *Round Table Discussion: Comparison of principles of operation and stock characteristics and paper properties produced at various power consumptions from use of various types of stock preparation equipment.*
2. *The J. R. Booth Stock Preparation System* by R. F. Vokes, Dilts Machine Works.
3. *A Method for Determining the Hydraulic Properties of Woven Wire Mesh Screens* by John F. Halladay, American Coating Mills (By title)

2:00 P. M. ALKALINE PULPING SESSION (Room B-C)

KENNETH G. CHESLEY, Crosset Lumber Co., Chairman

1. *Fundamental Research on Tallol and Sulphate Turpentine and Commercial Exploitation of the Results* by Torsten K. Hasselstrom, G. & A. Laboratories.
2. *Wood Utilization Symposium*
   a. *Fines Made in Chippers* by N. P. Wardwell, Carthage Machine Co.
   b. *Substitutes for Round Pine Wood in Making Alkaline Pulp* by E. H. Hill, North Carolina Pulp Co.
   c. *The Effect of Small Chip Sizes in Sulphate Pulping* by K. G. Chesley, and N. F. Robertson, Crossett Lumber Co.
   d. *Pulping of Hardwood-Pine Mixtures* by Mark W. Bray, Forest Products Laboratory.
   e. *The Kraft Pulping of Southern Tannin-Rich Woods* by L. V. Forman, Inst. Paper Chemistry.
3. *Injection Alkaline Pulping of Cottonwood With Conductometric Control* by S. D. Wells, G. E. Martin, and D. R. Moltzau, Inst. Paper Chemistry (By title).

2:00 P. M. COATING SESSION (West Ball Room)

WERNER KAUFMANN, Kupfer Bros. Co., Chairman

1. *Hot Melt Coatings* by J. W. Viner, Interchemical Corp. and Bert C. Miller, Bert C. Miller Co.
2. *Coloring Paper and Paperboard with a Modified Aniline Press* by J. W. Viner, Interchemical Corp.
3. *Panel Discussion: Post War Aspects of Coating* by Werner Kaufmann, C. G. Landes, American Cyanamid and Chemical Co., A. B. Copping, International Paper Co., J. E. Strasser, Stein, Hall Mfg. Co., F. W. Egan, John Waldron Corp., James Masserine and F. A. Weymouth, International Printing Ink Co., J. F. Halladay, American Coating Mills, D. D. Uong, Fitchburg Paper Co., J. E. Getty, West Virginia Pulp & Paper Co., F. H. Frost, S. D. Warren Co. and E. A. Georgi, Hercules Powder Co.

WEDNESDAY, FEBRUARY 16, 1944

9:30 A. M. CONTAINERS AND CONTAINER TESTING SESSION (Room B-C)

ARNO W. NICKERSON, and J. D. MALCOLMSON, Chairmen

1. *New Sizing Test for V Board Components,* by R. W. Kenneth Ulm, Ohio Box Board Co.
2. *Bituminous Emulsions in V Boards and Containers* by E. M. Lorenzini, American Bitumels Co.
3. *Round Table Discussion: Current Problems Relating to Container Testing Methods.*

9:30 A. M. PLASTICS SESSION (East Ball Room)

ALFRED J. STAMM, Forest Product Laboratory, Chairman

1. *Plastics and Wood Products* by Alfred J. Stamm, Forest Products Laboratory.
2. *Resins for Paper Base Laminates* by N. D. Hanson and F. P. Wilson, Bakelite Corp.
3. *Selection of Resins for Various Applications Involving Paper Laminates* by E. S. Bauer, Monsanto Chemical Co.
4. *Melamine Laminates* by R. H. Malamphy, American Cyanamid Co.
5. *The Effect of Moisture Content of the Impregnated Sheet on the Physical Properties of Paper Base Plastics* by A. H. Croup, Hammermill Paper Co.
6. *The Abrasive Resistance of Paper Base Plastics and Associated Materials* by E. R. Hoffman, Hammermill Paper Co.

9:30 A. M. ENGINEERING SESSION (West Ball Room)

W. G. MACNAUGHTON, News Print Service Bureau and RODERICK O'DONOGHUE, Consulting Eng., Chairmen

1. *Electronics Possibilities in the Paper Industry* by C. J. Madsen and R. R. Baker, Westinghouse Elec. & Mfg. Co.
2. *Fundamentals of Asbestos Friction Materials* by R. T. Halstead, Johns-Manville Co.
3. *The Mechanism of Flow of Paper Stock in Pipes* by John L. Gray and J. A. Van den Akker.
4. *Streamlining Paper Machine Design* by Kurt Wandel, Consulting Engineer.
5. *Steam Plants in Terms of Post War Planning* by E. F. Burns, International Paper Co.
6. *Power Loads on Calenders of Newsprint Machines* by W. G. MacNaughton.

9:30 A. M. BACTERIAL CONTROL AND STREAM IMPROVEMENT SESSION (Grand Ball Room)

R. V. TORREY, Riegel Paper Corp. and L. B. MILLER, W. D. and L. H. BETZ, Chairmen

1. *Bacterial Examination of Paper* by John W. Appling, Inst. Paper Chemistry.
2. *Experience of a Papermill in Bacterial Control,* by George M. Suydam and Ruth R. McConkey, Riegel Paper Corp.
3. *A Study of Methods of Slime Control* by John W. Appling.
4. *Stream Pollution Problems of the Tennessee Valley* by W. G. Stromquist, Principal Sanitary Engineer, T.V.A.
5. *National Council for Stream Improvement* (Speaker to be announced).
6. *Pros and Cons Regarding the Recovery of Fibers from White Water* by Karl Fries and J. D. Gaffney, Rhinelander Paper Co.

7. *Treatment of Papermill Wastes for Recovery of Fiber and Filler* by A. C. Embshoff, Infilco, Inc.
8. *A Filter Pump-Operated Automatic White Water Sampler* by E. Heslop, Provincial Paper Mills (By title).

Note: Any papers not presented in this morning's session will be presented at the Water Session in the afternoon.

2:00 P. M. WATER SESSION (Room B-C)

LEWIS B. MILLER, Chairman

Symposium: Demineralizing of Water.

1. *Demineralizing of Water for the Pulp and Paper Industries* by Eskel Nordell, Permutit Co.
2. *Resinous Ion Exchange Application* by Edward R. Mueller, Resinous Products & Chemical Co.
3. *Equipment Used in Demineralizing Water* by W. S. Morrison, Illinois Water Treatment Co.
4. *The Demineralization of Water by Ion-Exchange: The Ionac Four-Bed System* by W. E. Manring, American Cyanamid & Chemical Co.

2:00 P. M. MECHANICAL PULPING SESSION (West Ball Room)

R. M. DRUMMOND, International Paper Co., Chairman

Symposium: Sodium Peroxide Bleaching of Mechanical Pulps.

1. *General Description of the Process* by J. S. Reichert, E. I. du Pont de Nemours Co.
2. *Characteristics of Sodium Peroxide Bleached Mechanical Pulp and Applications in Paper Manufacture* by Lyman Beeman, F. C. Goodwill and Russell Schearer, St. Regis Paper Co.
3. *Printing Properties of Papers Containing Sodium Peroxide. Bleached Mechanical Pulps* by Kent Rhodes, *Time—Life—Fortune Magazines.*
4. *Stain Reactions of Unbleached and Bleached Groundwood Pulps* by John H. Graff, Inst. Paper Chemistry (By title).
5. *Effect of Varying the Composition of the Bleaching Solution* by J. S. Reichert, D. J. Campbell and R. A. Secord.
6. *Control of Metal Catalysts in the Bleaching Operation,* by J. C. Reichert, D. J. Campbell and R. T. Mills.
7. *Machinery for Use in the Bleaching of Groundwoods* by Eric V. Ullmann, Sandy Hill Iron & Brass Works.

2:00 P. M. PLASTICS SESSION (East Ball Room)

ALFRED J. STAMM, Chairman

1. *Use of Synthetic Resins in Papermaking* by William Abramowitz, John Y. L. Kao, Ashworth N. Stull and Robert W. Worden, American Resinous Chemicals Corp.
2. *General Aspect of GR-S Rubber Saturants* by Ralph Nazzaro, Mellon Institute.
3. *Developments in the Manufacture of Structural Products from Hydrolyzed Wood* by R. M. Boehm, Masonite Corp.
4. *Papers for Plastic Laminants* by W. G. Hendricks, Byron Weston Co.
5. *Resins for Paper Base Plastics,* by H. Kline, Reichhold Chemicals, Inc.

THURSDAY, FEBRUARY 17, 1944

9:30 A. M. TESTING AND WATER VAPOR PERMEABILITY SESSION (Room B-C)

P. F. WEHMER, Electrical Testing Laboratories, and W. H. GRAEBNER, Marathon Paper Mills, Chairmen

1. *Use of the Dry Indicator Method for Testing the Water Resistance of Asphalted Papers* by E. G. Mullen, American Reenforced Paper Co.
2. *Round Table Discussion: Water Vapor Permeability Testing.*
3. *A New Method for Evaluating the Opacifying Power of Pigments* by Alan P. Adrian, Detroit Sulphite Pulp and Paper Co.
4. *Projection Arrangement for the Determination of Fiber Dimensions* by John Graff and John R. Feaval, Inst. Paper Chemistry (By title).
5. *Additional Weight Factors of Pulps* by John Graff (By title).

9:30 A. M. FIBROUS MATERIALS SESSION (Grand Ball Room)

JOHN TRAQUAIR, The Mead Corp., Chairman

The Raw Materials Situation by Daniel Graham, WPB.

9:30 A. M. FUNDAMENTAL RESEARCH SESSION (West Ball Room)

HARRY F. LEWIS, Inst. Paper Chemistry, Chairman

1. *Effect of Esterification of Pulp Fibers Upon the Strength Properties, Hygroscopicity, and Hygroexpansitivity of Paper,* by J. J. Harrison, Ohio Box Board Co.
2. *The Nature of Lignin Materials in Redwood Bark* by F. E. Brauns and Harry F. Lewis. Inst. Paper Chemistry.
3. *Esters of Certain Lignin Derivatives* by F. E. Braums and Joseph L. Clark, Inst. Paper Chemistry (By title).
4. *Recent Work at the Institute of Paper Chemistry on the Dielectric Properties of Paper* by J. A. Van den Akker, Inst. Paper Chemistry. (By title)
5. *Surface Activity and Its Application to Paper* by John J. Miskel, National Oil Products Co.

1:30 P. M. ANNUAL LUNCHEON (Grand Ball Room)

R. A. HAYWARD, Presiding

Address: To be announced.

Medal Award to D. Clark Everest, Marathon Paper Mills by Allen Abrams on behalf of the Technical Association.

TAPPI Notes

Sydney Coppick, formerly professor at the New York State College of Forestry, is now senior chemist for the National Research Council at Columbia University.

Reginald H. Hurst, formerly of the Kalamazoo Vegetable Parchment Company, is now director of the Package Testing Laboratory, Office of the Quartermaster General, Washington Quartermaster Depot, Cameron, Va.

Robert Elias, formerly of the Detroit Sulphite Pulp and Paper Company is now chief chemist of the Whiting-Plover Paper Company, Stevens Point, Wis.

Lester H. Peterson, formerly with the Celanese Corporation of America, is now with the Schering Corporation, research and development department, Bloomfield, N. J.

New TAPPI Members

The executive committee of the Technical Association of the Pulp and Paper Industry has elected the following to membership:

Paul V. Barrow, research engineer, Container Corporation of America, Manayunk, Philadelphia, Pa., a 1934 graduate of Villanova College.

Major Henry C. Byrte, chairman, Witchampton Paper Mills and director of Universal Emulsifiers, Ltd., Witchampton, Nr. Wimborne, Dorset, England, a graduate of Marlborough College, 1911.

Joseph Dickson, 239 Massachusetts Avenue, Cambridge, Mass., sales promotion and development of starch and malt products, Anheuser-Busch, Inc., an 1899 graduate of Washington University.

Kenneth Findley, president and general manager, the F. G. Findley Company, 1243 North 10th street, Milwaukee, Wis., a 1929 graduate of the University of Wisconsin.

William F. Fowler, Jr., research chemist, Eastman Kodak Company, Rochester, New York, a 1940 graduate of the New York State College of Forestry.

John E. Goodwillie, sales engineer, Beloit Iron Works, Beloit, Wis., a 1920 graduate of the University of Michigan.

Bernard F. Hale, student at New York State College of Forestry, Syracuse, N. Y., graduating in 1944.

Milner Harris, Laboratory Shift Foreman, International Paper Company, Southern Kraft Division, Mobile, Ala., a 1940 graduate of the University of Alabama.

Lloyd Hornbostle, chief engineer, Beloit Iron Works, Beloit, Wis., a 1923 graduate of Lehigh University.

Harry B. Hulse, Division Chemist, Gair Bogota Corrugated and Fibre Box Corporation, Bogota, N. J. Attended Newark College of Engineering, Newark Technical School and University of Maine.

William John Parmley, student, New York State College of Forestry, Syracuse, N. Y., a 1943 graduate of the college, he is now taking a post graduate course.

Francis G. Pavlick, mill chemist in charge of chemical laboratory, Mosinee Paper Mills Company, Mosinee, Wis. Has taken courses in chemical engineering, pulp and paper making and dyestuffs.

Sanford L. Pincus, student at New York State College of Forestry, Syracuse, N. Y., graduating in 1945.

Myles Reif, assistant general superintendent, Blandin Paper Company, Grand Rapids, Minn., a 1937 graduate of Marquette University.

Berwyn B. Thomas, student, Institute of Paper Chemistry, Appleton, Wis., a 1940 graduate of the University of Arizona.

Frederick W. Schreiber, director of research, the Personal Products Corporation, Milltown, N. J., a 1936 graduate of the Philadelphia College of Pharmacy and Science.

P. H. Tigwell, sales engineer, Beloit Iron Works, Beloit, Wis.

Harold F. Wakefield, Group Leader, Development Laboratory, Bakelite Corporation, 230 Grove street, Bloomfield, N. J., a 1923 graduate of the University of Wisconsin.

Jack J. Yirak, student, Institute of Paper Chemistry, Appleton, Wis., a 1942 graduate of Lawrence College.

N. E. TAPPI Discusses Deinking

The New England Section of the Technical Association of the Pulp and Paper Industry met at the Hotel Roger Smith in Holyoke, Mass., on January 21, 1944. This was part of a joint meeting with the Connecticut Valley Superintendents' Association. Arrangements were under supervision of a committee consisting of H. T. Barker, P. S. Barnhart and F. A. Strovink. W. L. Foote presided. H. L. Mellen introduced A. E. Bachmann, vice president of Missisquoi Corporation, who had charge of the technical program. Fred C. Clark presented a review of the situation on deinking of newsprint. Following this, Robert F. Vokes of Dilts Machine Company, talked on "Use of the Hydrapulper for Treatment of Waste Stock in Continuous Operation". A lively discussion followed this talk. Present by request to take part in this discussion were Messrs. R. W. Pattison, O. W. Messner and C. B. Muzzy.

R. T. Bingham of National TAPPI was introduced and spoke briefly about the national convention to be held in New York in February.

On Saturday afternoon the Superintendents division held a round-table discussion on Color, led by Ivar Ekholm of the National Aniline Division of Allied Chemical and Dye Company. Saturday evening a dinner dance was held.

The following attended: Norman Alper, R. W. Alderson, C. Anderson, Wm. Anderson, C. J. Backus, A. E. Bachmann, A. F. Bailey, H. T. Barker, P. S. Barnhart, G. H. Batchelder, Mr. & Mrs. N. I. Bearse, R. T. Bingham, H. J. Browne, A. F. Brunell, S. A. Brunell, Frank Buss, J. B. Calkin, G. S. Carroll, J. F. Carroll, F. E. Caton, Chas. Champion, C. H. Child, F. C. Clark, Benj. Collison, J. F. Cronin, L. A. Crouse, P. A. Donaghy, J. K. Donahue, R. H. Doughty, A. B. C. Drew, H. E. Duston, Howard Ferguson, J. T. Fitzgerald, T. J. Flaherty, W. L. Foote, Wm. Gammie, F. J. Gillespie, Andrew Gillis, H. M. Grasselt, A. E. Hazen, A. L. Hobday, W. F. Hoffman, C. I. Horton, H. J. Hosking, Andrew Jackson, John Janson, F. E. Johnson, Werner Kaufmann, Miss Lena E. Kelley, J. P. Kennedy, P. J. Kennedy, Jr., C. H. Kent, Miss Helen U. Kiely, R. E. Kilty, Paul Knight, W. E. Larkin, R. E. Lubenbert, A. S. Lant, J. T. Leecock, Mr. & Mrs. H. S. Leonard, John Marone, B. J. Mayo, R. D. McCarron, H. L. Mellen, O. W. Messner, J. C. Mooney, W. J. Morehouse, T. S. Morse, C. A. Mumford, C. F. Murch, C. B. Muzzy, J. J. O'Brien, C. J. O'Neil, R. W. Pattison, G. A. Peterson, J. S. Phelps, V. L. Powell, A. E. Regnier, M. M. Rubin, F. W. Schneider, Arthur Scott, C. B. Slocum, C. S. Smith, L. M. Smith, E. W. Strecker, Mr. & Mrs. Geo. Sullivan, Chester Szatkowski, W. G. Trotman, R. F. Vokes, G. K. Warner, J. F. Wright, C. J. Yarber, L. M. Yoerg.

Paper Mill Shipments Lower

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., January 26, 1944—In November 1943 indexes of the value of paper mill shipments was 163 compared with 167 in October and with 143 in November 1942 according to the industry survey of the Department of Commerce taking an average month of 1939 at 100.

Also the November 1943 index of the value of paper mill inventories was 126.5 compared with 129.8 in October 1943 and 146.5 in November 1942 also taking an average 1939 month at 100.

Paper Problems in Telephone Apparatus*

By David A. McLean[1]

Abstract

The two most important critical telephone uses of paper, namely, in cables and in condensers, are discussed briefly. One of the research projects on paper undertaken at the Bell Telephone Laboratories which involved the material used in condensers, is described.

The continuous and efficient functioning of the telephone is dependent upon hundreds of materials of which the telephone plant is composed. Failure of a vacuum tube, coil, resistor, crystal, condenser, or any other element, would impair or disrupt communication. The telephone plant is engineered to last for roughly a generation, so that obsolescence overtakes more equipment than field failure. Were this not so, communication failures would be much more frequent and telephone service more expensive, owing to the high cost of locating and repairing defective parts. For this reason a prominent feature of the Bell Laboratories' work is to conduct detailed studies of the hundreds of materials used in the telephone plant, evaluate dozens of new materials annually to determine their potential usefulness as telephone materials, and develop special materials to meet specific needs when no suitable ones are available.

The place of paper in the telephone plant is important and venerable. So widely has paper been used and so well has it performed that, even with the multiplicity of new materials available today, it would be difficult to replace. The critical uses of paper in communications equipment are those wherein it forms an electrically insulating component of apparatus as in telephone cables, dielectric for condensers, and inter-leaving for coils, relays and transformers. In such apparatus large areas of very thin paper must retain their insulating quality for many years.

* Presented at the Army and Navy Requirements Conference of the Technical Association of the Pulp and Paper Industry, Palmer House, Chicago, Ill., Sept. 21-24, 1943.

[1] Chemist, Member of the Technical Staff, Bell Telephone Laboratories, New York City.

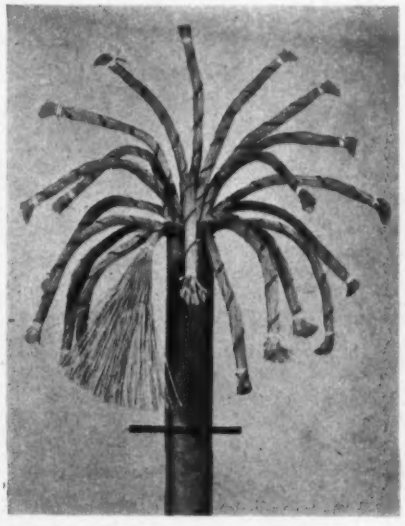


FIG. 1

2121 Pair Exchange Area Telephone Cable. Lead Alloy Sheath Partially Removed

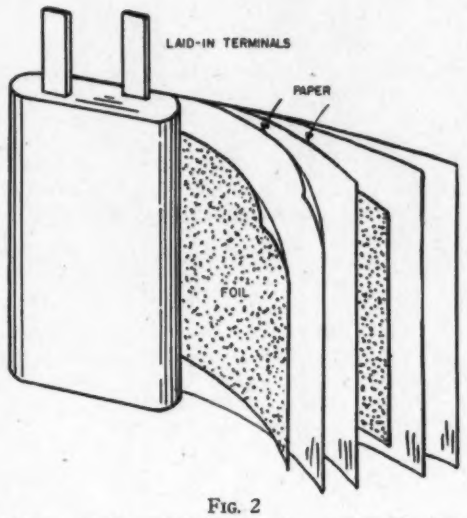


FIG. 2

Typical Paper Condenser Unit Construction. Laid in Terminal Type

Telephone Cable Paper

Present day telephone communication is dependent to a marked degree upon the paper which insulates individual conductors in telephone cable. In the manufacture of telephone toll cable, copper wires are wrapped with paper tape at a rate of some 3,000 r.p.m. The insulated wires are cabled and dried and the cables then covered with an extruded lead-alloy sheath. Most exchange area cable is made by forming a ribbon of paper on the wire directly from the pulp, using a cylinder machine. This ribbon is polished around the wire to form the insulating covering, after which the insulated wires are cabled, dried and sheathed as for toll cable *(1, 2, 3)*. Figure 1 is a photograph of an exchange area cable containing 2121 pairs of conductors.

The properties of the cable are dependent to a large degree upon the chemical and mechanical properties of the paper *(4)*. Chemical purity, in the sense of freedom from electrolytes, is necessary to insure against undue embrittlement during processing. Mechanical strength and flexibility insure that the paper will withstand the severe mechanical treatment of the insulating operation. As low density as is compatible with high mechanical strength and rigidity of structure is desirable to minimize the capacity and conductance between conductors. Uniformity of composition and structure contribute to uniform and satisfactory cable characteristics. Because of the low voltage used in telephone cables, dielectric strength and life requirements are readily met, in contrast to power cable in this respect.

Paper Condensers

The paper condenser comprises a winding of two

metallic foil electrodes interleaved with paper in sufficient thickness to withstand, after drying and impregnation with a suitable filling agent, the anticipated service conditions. The construction of a typical paper condenser is illustrated in Fig. 2.

Probably nowhere is more expected of an organic material than is demanded of paper in electrical condensers. In certain types of condensers the dielectric must withstand d.c. potentials corresponding to a stress of about 500,000 volts per inch of dielectric thickness for long periods of time, even at high ambient temperatures. The instantaneous dielectric strength of the thin dielectric in a paper condenser is as high as 5,000,000 volts per inch of dielectric thickness, or about 60 times the dielectric strength of air for 1 inch electrode spacings at normal atmospheric pressures.

The manufacture of condenser paper of excellent mechanical properties and high chemical purity in closely controlled thicknesses down to .0003 inch is a manufacturing achievement of the paper industry. Although the demand for such paper, when set down beside demands for most other types, is comparatively small, its contribution to communication would be difficult to overestimate. All condenser paper in use at present in the telephone plant, if piled compactly, would occupy only a 66 foot cube, yet it is so thin that the strips of paper, if placed end to end, would circle the earth 300 times, forming a belt 75 feet wide. The radio industry requires large amounts of condenser paper to meet its needs. At present practically the entire paper condenser manufacturing facilities of the telephone and radio industry are devoted to supplying condensers for use in military communication and other military needs.

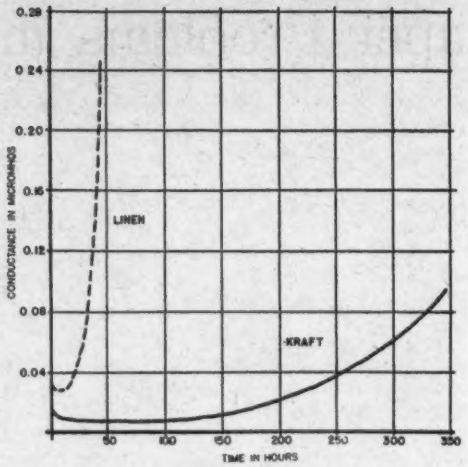


FIG. 3

Deterioration of Kraft and Linen Paper Condensers Containing a Chlorinated Aromatic Impregnant, Aluminum Electrodes. D.C. Voltage Continuously Applied

The two examples given above contain an interesting example of the versatility of paper as electrical insulation. In the first, low electrical capacity is an important requirement, whereas in the second, maximum capacity per unit volume is required. The unique physical structure of paper makes it possible to meet these requirements in the one case by using a relatively loose paper structure in which the fiber substance is "diluted" with air to give a dielectric constant of 1.5 to 2.0, and in the other case by using a dense paper structure saturated with solids or liquids of high dielectric constant, resulting in an overall die-

A B C

FIG. 4

Sections of Paper from Condensers Tested at 100° C. Photographs Taken with Ultra-Violet Light, Showing Fluorescence of Decomposed Areas. A—Linen Paper, 120 Volts D.C., 630 Hours. B—Kraft Paper, 120 Volts, D.C., 720 Hours. C—Kraft Paper, 400 Volts D.C., 430 Hours.

lectric constant as high as 6 to 7 *(5)*. Where the greatest demands for compactness exist, the filling media employed are frequently chlorinated aromatic compounds such as chlorinated naphthalene or chlorinated diphenyl which have high dielectric constants due to the polarity of their molecules.

Condenser Paper Decomposition

Despite the generally excellent performance of paper condensers, there is a continuous demand for improvements which will permit still higher stresses, higher operating temperatures, or will provide greater margins of safety. This demand has been considerably augmented by military needs, which require communication equipment which will operate reliably under severe conditions of voltage, temperature, and mechanical shock. For these reasons, paper condensers provide some of the most challenging paper research problems, an illustration of which is given.

Paper condensers employing aluminum foil electrodes and chlorinated impregnating compounds have served the purposes of the telephone plant adequately for a number of years in places where temperatures and voltages are moderate. However, as the demand arose for more compact apparatus and for condensers to operate at higher d.c. stresses and at higher temperatures, laboratory tests showed that this combination as it stood did not provide a comfortable margin of safety. In investigating this situation, it was noted that condensers containing kraft paper performed much better under accelerated testing conditions than condensers containing linen paper of comparable chemical purity. The difference in performance manifested itself in several ways. Most important, life tests at elevated temperatures and voltages showed the kraft paper condensers to have a life four or five times as long as similar linen paper condensers. When a potential was applied to linen paper condensers held at elevated temperatures and continuous measurement was made of electrical leakage through the dielectric, the decomposition of the insulating components as manifested by a rising leakage current was much more rapid than for kraft paper condensers, as illustrated in Fig. 3. Finally, when condensers were dismantled after failure or shortly prior thereto, many decomposed areas were found scattered throughout the paper. These areas were brown and embrittled, giving evidence of partial carbonization. Such regions appeared much earlier in linen paper than in kraft. A photograph of the decomposition in paper is shown in Fig. 4. Only when tested under higher voltages (Fig. 4C) do the kraft papers show decomposition in a time comparable to the linen paper at 120 volts.

This, then, was a problem that challenged research: Here were two simple structures having only three components; paper, impregnant, and electrodes, and both identical except for the paper, yet showing widely different characteristics when subjected to d.c. voltage. The linen paper was composed of relatively pure cellulose fibers whereas the kraft contained relatively large amounts of lignin, pentosans, and ash. It had been generally assumed that linen paper, because of its purity, would perform equally as well if not better, and it was therefore somewhat surprising to find the kraft to be substantially better. The initial object of the research project growing out of this observation was that of determining the cause of this difference in performance.

Chemical Investigation

The first chemical work consisted of determination of the impurities in the decomposed areas of failed or nearly failed condensers. It was soon established that these areas contained free hydrochloric acid. This was determined by one of the microchemical techniques widely used in modern telephone research. A section of linen paper containing decomposed areas was covered with a sheet of indicator paper impregnated with barely alkaline phenolphthalein. The indicator was decolorized in spots corresponding exactly to the decomposed areas, demonstrating the presence of acidity. Another sheet of paper containing decomposed areas was similarly treated with a silver chromate indicator paper used in the detection of chlorides. This indicator gave a definite positive reaction for chlorides in the decomposed areas. This demonstration of the presence of acidity and the presence of free chlorides is, of course, equivalent to the demonstration of the presence of hydrogen chloride.

Since the condenser paper used in these studies was extremely low in chlorides (about .004%) it was obvious that the source of the chloride ion was the chlorinated aromatic impregnating compound. It was known that such compounds decompose to give hydrogen chloride under the influence of the electric arc or strong ultra-violet light. It now appeared that they would decompose under the conditions existing in a condenser. Strong evidence has been obtained at our laboratories that this decomposition is activated by the metal electrodes. This primary decomposition, however, is very limited in rate and amount, and probably of itself would not be perceptibly harmful. One can heat the condensers for very long periods without serious degradation so long as no voltage is applied; when d.c. stress is applied, however, rapid depreciation of electrical properties results. The process of this depreciation is pictured as follows: The minute quantities of hydrogen chloride liberated are electrolyzed, aluminum chloride being formed at the aluminum anode. Aluminum chloride is well known to be a powerful agent for the degradation of organic compounds. The most important action of aluminum chloride in the condenser is to further decompose the chlorinated impregnant, providing more hydrogen chloride, providing more aluminum chloride, and so on until failure. This theory accounts for the autocatalytic form of the current-time curves and for the specificity of these curves with respect to type of electrode metal used *(6)*. It should be pointed out in the latter connection that despite these reactions associated with aluminum electrodes, aluminum is in most respects superior to other metals available in foil form at reasonable cost.

Relation of Exchange Capacity of Paper to Condenser Behavior

Since the decomposition was pictured as a vigorous reaction of the self-accelerating type, it seemed likely that whatever kraft paper was doing, it was doing during the early stages of the reaction when small chemical variations might easily influence the whole course of events to follow. Hence, it was postulated that kraft paper was able to absorb, neutralize, or otherwise inactivate, the small quantities of hydrogen chloride formed in the primary decomposition reaction. It was further postulated that linen paper was either incapable of this action or limited in capacity. The experimental proof of this point was simple but convincing. It was found that if a cer-

tain amount of kraft paper was immersed in any dilute acid, it would neutralize in the neighborhood of 0.06 to 0.10 milli-equivalents for each gram of paper, three to four times as much as an equal quantity of linen paper. This experiment has been performed on scores of samples, and while both linen and kraft papers vary in exchange capacity, the level for kraft papers is far above that for the linen *(7)*. It thus appeared reasonable to conclude that the papers, by serving as acid buffers, delayed the onset of decomposition, the kraft paper for a longer period because of its greater capacity.

The acid neutralization by both types of paper was found to be explained by the familiar base exchange concept, *(7, 8)* the hydrogen of the acid exchanging for chemically bound metallic cations constituting the ash of the paper. The exchange capacity was found to be directly proportional to the ash after a small allowance is made for the inert ash, principally silica. This is demonstrated in Fig. 5.

Application of Results

One might say that at this point the original object of the investigation had been achieved, but had the investigation stopped here, it would simply have explained an interesting phenomenon and would have been of little practical or economic value. The various extensions of the original research will not be discussed in detail. Many details are only indirectly connected with paper, and the specific methods discovered for improving condensers containing chlorinated compounds are for military reasons being disclosed by the Western Electric Company only to other manufacturers of condensers for the armed forces. However, it can be stated that this phase of the program was successful. It resulted in condensers which will withstand accelerated testing conditions about 100 times as long as the early linen paper condensers, about 25 times as long as the early kraft condensers. The progress of this development is shown graphically in Fig. 6. The last two steps illustrated in this figure did not follow directly from our work on kraft and linen papers, but required considerable additional investigation for their achievement. Yet the explanation of the influence of paper on condenser performance provided the core of fundamental knowledge about which the more recent improvements developed.

The improvement in condensers brought about by this work has resulted in the production of telephone condensers having adequate factors of safety realizing the small size inherent in the use of chlorinated impregnants. Improved condensers corresponding to the extreme right of Fig. 6 are used in equipment manufactured for the armed forces, on whose behalf these techniques and developments have also been made available to other manufacturers. Considering the severe service conditions to which military equipment is subjected, it can be confidently stated that these developments have aided in the reliability of military communication.

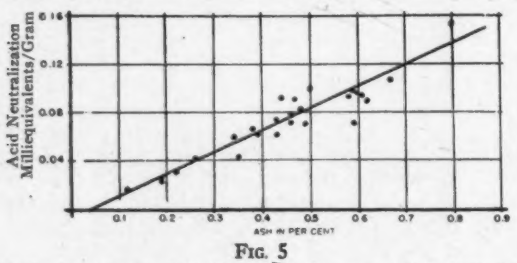


Fig. 5

Relationship between Acid Neutralizing Power and Ash Content for 26 Samples of Condenser Paper

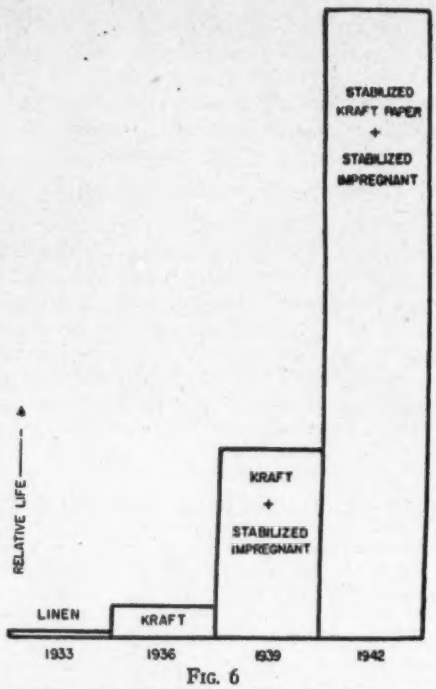


Fig. 6

Accelerated Life Test Performance. Paper Condensers Containing Chlorinated Impregnants

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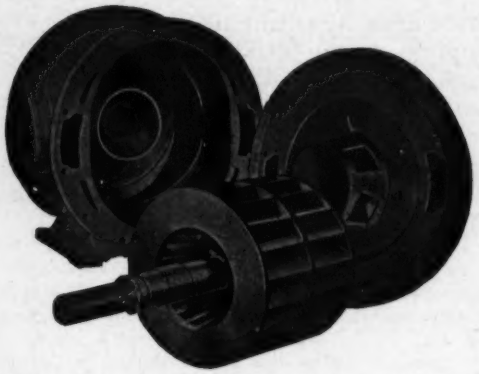
TAPPI Meets at Kalamazoo

The ninth annual meeting of the Kalamazoo Valley Section of the Technical Association of the Pulp and Paper Industry and the Michigan Division of the Superintendents Association was held at the Park American Hotel, Kalamazoo, Mich., on January 13, 1944. Dwight Stocker, president of the Michigan Paper Company presided as toastmaster and briefly discussed the activities of the pulp allocation committee of the WPB, of which he is a member. About 350 attended. Talks were given by S. G. Blankinship, president of the Superintendents Association, R. L. Eminger, Secretary of the Superintendents Association, R. A. Hayward, president of TAPPI and L. W. Sutherland, Chairman of the Board of the Sutherland Paper Company. The main speaker was James E. McCarthy, dean of the College of Commerce of Notre Dame University. His subject was "The Objectives of Free Enterprise." He traced the use of free enterprise from the restricted economy of the Colonies under the repressive British ban on any manufacturing enterprise, cited the industrial development, admitted industry's mistakes and flayed corrective measures proposed by various groups such as advocates of stateism and collectivism which tend to interfere with liberty.

SIMPLICITY



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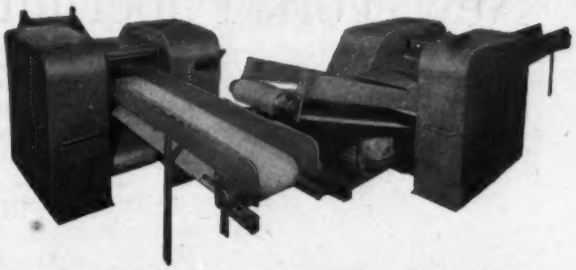

FOR POST-WAR MODERNIZATION PLACE CUTTER ORDERS NOW

A recent survey of paper mills' post-war equipment needs shows cutters as 15th on list of 62 items.

Don't be low on our list of orders for post-war delivery. Orders will be filled in sequence as received.

This #36 tandem machine cuts rags two ways, into pieces as small as desired. Capacity 1 ½ tons an hour.

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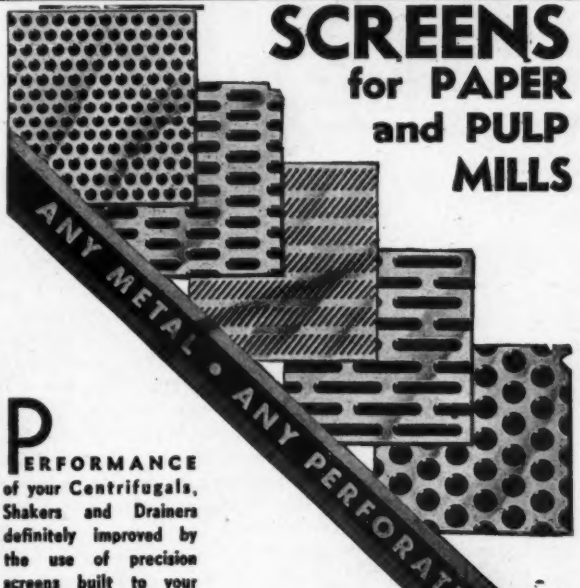

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New York Paper and Pulp Market Review

Over-All Paper Production For 1943 Is Currently Estimated At 16,700,000 Tons With Pulpwood Consumption At 15,000,000 Cords —Board Mills Need More Waste Paper—Rags Markets Are Active.

Office of the PAPER TRADE JOURNAL.
Wednesday, January 27, 1944.

Consumption and production of paper continues to be maintained at a relatively high level. Wholesale orders indicate some slight decline in some paper products, but the buying trend is high. Reports from some of many manufacturers' representatives, jobbers, and general paper merchants this week, reflect a continued tight supply situation in kraft and sulphite wrapping and bag papers.

The index of general business activity for the week ended January 15, rose to 146.8, from 144.1 for the previous week, compared with 138.8 for the corresponding week last year. The index of paper board production was 152.0, compared with 147.0 for the preceding week, and with 142.1 for the corresponding week last year.

Paper production for the week ended January 15 was estimated at 91.2%, compared with 88.1 for 1943, with 103.9% for 1942, with 105.0% for 1941, and with 90.1% for the corresponding week for 1940.

Paper board production for the week ended January 15 was 93.0%, compared with 88.0% for 1943, with 102.0% for 1942, with 102.0% for 1941, and with 78.0% for the corresponding week for 1940.

The over-all production of paper for 1943 has been estimated by the American Paper and Pulp Association at 16,700,000 tons; pulpwood consumption, 15,000,000 cords, representing 1.11 tons of paper and paper board per cord of pulpwood. This compared with an over-all production of paper and paper board in 1942 of 16,522,000 tons; 16,845,000 cords of pulpwood and the production of .98 tons of paper per cord of pulpwood. In the record year of 1941, over-all production of paper and paper board was 17,304,143 tons; 16,259,000 cords of pulpwood were consumed and 1.06 tons of paper and paper board were produced per cord of pulpwood.

Wood Pulp

In its published statistical background of pulpwood, the American Paper and Pulp Association states that in the industry's No. 1 raw material, pulpwood, "the question is not one of how current receipts compared with the receipts during comparable periods of a year ago, but rather of how the wood cut during the cutting season of 1943, which will be delivered during 1944, compares with the wood cut during the season of 1942 which was delivered in 1943. It must be borne in mind that except in the South, where pulpwood receipts and consumption are more or less on a current basis, there is a considerable time lag between the cutting of pulpwood and its receipt at the mill. Receipts of pulpwood in 1943 were approximately 2,400,000 cords or 14.4% below the level of 1942. Consumption exceeded receipts by 700,000 cords, with the result that inventories were heavily reduced."

Rags

Mill buying of new cotton cuttings is reported active at this date. The volume taken by mills is sufficient to absorb about all available supplies.

Old cotton rags are in rather heavy demand this week. Prices on blues, whites and other roofing grades are firm at ceiling levels.

Old Rope and Bagging

Demand for hard fibers, particularly for old Manila rope, continues heavy. Prices are strong at ceiling levels.

No important change has been reported in the old bagging market this week. Trading is light, as it usually is at this time of the year. Prices continue nominal.

Old Waste Paper

Demand for paper stock continues urgent and the supply situation is critical. Board mill operation is threatened with increasing curtailment of production unless larger supplies of waste paper are available. Waste paper salvage drives continue to make progress. Some instances of temporary closing of board mills were reported last week.

Opinion expressed in some quarters of the trade that higher prices are needed to increase waste paper collections, is apparently not shared by the OPA as an essential measure.

Twine

No important change in the market situation in twine has been reported this week. Government requirements for all essential purposes are heavy. Prices are strong on all grades.

Paper and Cordage Men Hold Meeting

PHILADELPHIA, Pa., January 24, 1944—The Philadelphia Paper and Cordage Association, Inc., announces the election of the following officers for 1944: president, Jack Culverhouse, Fort Howard Paper Company; vice-president, E. L. Richards, Buffalo Envelope Company; treasurer, R. H. Decker, Dill & Collins; secretary, J. R. Howarth, Jr.. J. R. Howarth Paper Company. The new directorate is composed of George Corse, Dill & Collins; R. H. Gifford, H. M. Gifford Manufacturing Company; Harry Platt, Denney Tag Company; Harry Smith, Thos. W. Price Co.; F. M. Kurz, Whiting-Patterson Co., and Jack Shinners, Acme Specialty Sales Company. Immediately upon his election, president Culverhouse swung into action and appointed the following to serve on the respective committees: Entertainment: Carl Gardner, Groveton Paper Company; Lee F. Johnson, Gummed Products Company. Luncheon Speakers, Jack Shinners. Finance: F. M. Kurz, chairman; George K. Hooper, Hooper Paper and Twine Company, Amos Coath, Frank W. Winnie & Sons, Inc. Membership: Everett Hoffman, J. E. Fricke Company. Publicity: R. H. Smith, Universal Products. Golf: S. B. DeFarges, Jessup & Moore. Plans are under way to celebrate "ye olde time" members' birthday on March 17, time, place and names of honored guests to be announced in the next week or so.

THE RETURN OF COMPETITION

After the war competition in industry will be keener than ever before. Many millions of people who have been mobilized for war will be turned back into normal pursuits. New industries, new processes and new markets will dominate the economic picture.

The manufacturer who can meet his competitors' cost will be the one to survive. The low cost industries will be the ones to profit.

In this connection, remember that—

During the depression years of the early and middle thirties, industry expanded at a greater rate in the Seaboard Southeast than anywhere else in the Country.

The reason—

Operating factors are favorable and hence manufacturing costs are low.

When you plan on plant expansion, let us submit facts and figures on locations in the Seaboard Southeast. The inquiry will cost you nothing. It may be worth a lot to you.

INDUSTRIAL DEPARTMENT
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MODEL 28
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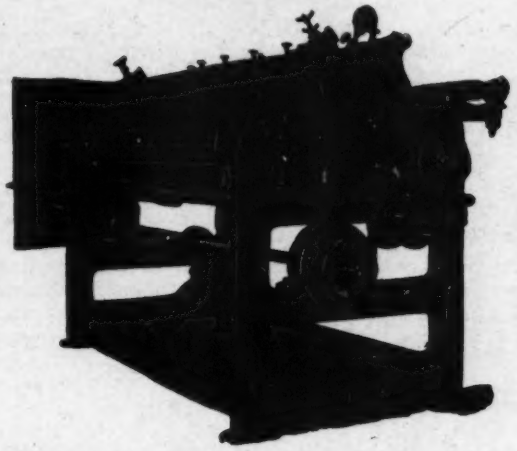

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MISCELLANEOUS MARKETS

Office of the PAPER TRADE JOURNAL
Wednesday, January 26, 1944.

BLANC FIXE—The market situation in blanc fixe continues to be reported unchanged. Prices are firm. The current quotation is $40 per ton for the pulp, in barrels, at works. The powder is quoted at $60 per ton, f.o.b., works.

BLEACHING POWDER — Current demand for bleaching powder is reported active. Demand is active, prices unchanged. Current quotations range from $2.50 to $3.10 per 100 pounds, in drums, car lots, at works.

CASEIN—OPA maximum prices on processed acid-precipitated casein are as follows: 10,000 pounds or more, 24 cents per pound; 2,000 pounds, 24½ cents per pound; less than 2,000, 24¾ cents per pound, f.o.b., shipping point. Imported 10½ cents per pound, f.o.b., source.

CAUSTIC SODA—Demand for caustic soda continues to be reported as very heavy. Shipments are large, with market indicating little change from tight supply situation. Quotations are firm and unchanged. The current quotation on solid caustic soda is $2.30 per 100 pounds; flake and ground are quoted at $2.70 per 100 pounds, in drums, at works.

CHINA CLAY—Quotations on china clay continue unchanged. Domestic filled clay is quoted at from $7.50 to $15 per ton; coating clay at from $12 to $22 per ton, at mines. Imported china clay is quoted at from $13 to $25 per long ton, ship side.

CHLORINE—Production currently reported adequate to meet allocation needs. Quotations are unchanged. Chlorine is currently quoted at $1.75 per 100 pounds, in single-unit tank cars, f.o.b., works.

ROSIN — Quotations on some grades of rosin are higher this week. "G" gum rosin is currently quoted at $4.13 per 100 pounds, in barrels, Savannah. "FF" wood rosin is currently quoted at $4.08 per 100 pounds, in barrels, New York. Seventy per cent gum rosin size is quoted at $4.39 per 100 pounds, f.o.b., works.

SALT CAKE—The market for salt cake is reported unchanged. Demand continues moderate. Domestic salt cake is currently quoted at $15 per ton, in bulk; chrome cake is quoted at $16 per ton. All prices in car lots, f.o.b., shipping point.

SODA ASH—Larger civilian supplies expected in month or two, with closing of four aluminum plants. Quotations are firm and conform to prevailing prices. Prices on soda ash in car lots, per 100 pounds, are as follows: in bulk, $.90; in paper bags, $1.05; and in barrels, $1.35.

STARCH—A little real improvement in supply of cash corn is reported but market is tight at this date. Prices are unchanged. Pearl is currently quoted at $3.10 per 100 pounds; powdered starch at $3.20 per 100 pounds; all prices in bags, car lots, f.o.b., Chicago.

SULPHATE OF ALUMINA — Demand and shipments of sulphate of alumina is reported moderate at this date. Iron free tight, due to restrictions. The commercial grades are quoted at from $1.15 to $1.25 per 100 pounds; iron free is quoted at $2.35 per 100 pounds. All prices in bags, car lots, f.o.b., works.

SULPHUR — Demand for sulphur continues active. Quotations continue unchanged. Annual contracts are currently quoted at $16 per long ton, f.o.b., mines. The current contract quotation at Gulf Ports is $17.50 per long ton.

TALC—Prices on talc are unchanged and continue to conform to prevailing market levels. Domestic talc is currently quoted at from $16 to $21 per ton, at mines.

MARKET QUOTATIONS

All market quotations, excepting those otherwise designated as official OPA maximum prices, are based on the manufacturers' price level as of October 1-15, 1941; maximum wholesale prices are based on the merchants' maximum prices for stipulated quantities at a quoted price to all customers of a like class, as shown by the merchant's sales records of goods delivered during March, 1942. A merchant's price list in effect in March 1942, showing quotations of actual shipments, will establish the current maximum prices.

Paper

(Delivered New York)

News, per ton—			
Roll, contract...	*$58.00	@	—
Sheets	64.00	"	—
* OPA Maximum Price.			
Kraft—per cwt.—Carload Quantities Zone A, f.o.b. Mill			
Superstandard Wrapping	*$5.25	@	—
No. 1 Wrapping...	*5.00	"	—
Standard Wrapping	*4.75	"	—
Standard Bag.....	*4.375	"	—
* OPA Manufacturers' Prices.			
Tissues—Per Ream—Carlots			
White No. 1.....	1.12½	"	—
White No. 1 M. G.	1.10	"	—
White No. 1½....	1.00	"	—
White No. 2.....	.90	"	—
Anti-Tarnish M.F..	1.20	"	—
Colored	—	"	—
Kraft	.95	"	—
Manila	.90	"	—
Toilet—1 M. Sheets—Per Case			
Unbleached	4.25	"	—
Bleached	5.70	"	—
Unbl. Toilet, 1 M.	4.16	"	—
Bleached Toilet...	5.70	"	—
Paper Towels, Per Case—			
Unbleached, Jr.....	2.20	"	—
Bleached, Jr.....	3.20	"	—
Manila—per cwt.—C. l. f. a.			
No. 1 Jute.....	11.25	@	—
No. 1 Manila Wrapping, 35 lb.....	6.00	"	6.25
No. 2 Manila Wrapping, 35 lb.....	5.75	"	6.00
Boards, per ton—			
News	*48.00	@	—
Chip	*48.00	"	—
Sgl. Mia. Ll. Chip	*60.00	"	—
White Pat. Coated	*75.00	"	—
Kraft Liners 50 lb.	*63.00	"	—
Binders Boards....	84.00	"	116.00

* OPA Base Prices per 10 tons. Less than 10 tons but over 3 tons, add $2.50; three tons or less, add $5; regular 35-39 basis, add $5.; basis 40-49, add $2.50; basis 91-100, add $2.50; basis 101-120, add $5.

The following are representative of distributors' resale prices:

Rag Content Bonds and Ledgers—White, Assorted Items, Delivered in Zone 1:

	Bonds	Ledgers
100% Rag Ext. No. 1	$39.10@$46.00	$40.25@$47.25
100% Rag	32.20 " 37.75	33.35 " 39.25
85% Rag	.... "	29.90 " 35.00
75% Rag	23.00 " 27.00	24.15 " 28.25
65% Rag	.... "	22.80 " 27.75
50% Rag	18.70 " 22.75	19.90 " 24.25
25% Rag	16.40 " 20.00	17.55 " 21.50

Colors at $1.00 cwt. extra.

Sulphite Bonds and Ledgers—White, Assorted Items. Delivered in Zone 1:

	Bonds	Ledgers
No. 1..	$10.55@$12.75	$11.70@$14.25
No. 2..	9.65 " 11.75	10.80 " 13.25
No. 3..	9.20 " 11.25	10.35 " 12.50
No. 4..	8.90 " 10.75	10.05 " 12.25

Colors $1.00 cwt. extra.

Free Sheet Book Papers—White, Cased Paper, Delivered in Zone 1:

No. 1 Glossy Coated...	$13.65	@	$15.50
No. 2 Glossy Coated...	12.40	"	14.00
No. 3 Glossy Coated...	11.60	"	13.25
No. 4 Glossy Coated...	11.15	"	12.75
No. 1 Antique (watermarked)	10.25	"	11.75
No. 2 Offset.....	9.60	"	11.00
A Grade E. F.....	9.35	"	10.75
A Grade S. & S. C....	9.60	"	11.00
B Grade E. F.....	8.85	"	10.25
B Grade S. & S. C....	9.10	"	10.50
C Grade E. F.....	8.55	"	9.75
C Grade S. & S. C....	8.80	"	10.00
D Grade E. F.....	8.25	"	9.50
D Grade S. & S. C....	8.50	"	9.75

Ivory & India at $.50 cwt. extra.

Wood Pulp

OPA Maximum Prices and Canadian Manufacturers Prices, Less Freight, Not Exceeding OPA Allowances.

Bl. Softwood Sulphite.....	$76.00		
Unbl. Softwood Sulphite.	65.00	@	66.00
Bl. Hardwood Sulphite.....	73.50		
Unbl. Hardwood Sulphite....	63.50		
Bl. Mitscherlich.....	81.00		
Unbl. Mitscherlich ...	72.00	@	82.00
N. Bleached Sulphate.....	86.00		
S. Bleached Sulphate.....	79.00		
N. Semi-Bleached Sulphate...	82.00		
S. Semi-Bleached Sulphate....	75.00		
N. Unbl. Sulphate.....	73.00		
S. Unbl. Sulphate.....	63.50		
Bl. Soda	66.00		
Unbl. Soda	62.00		
Groundwood	46.00		

Transportation Allowances Applying to Producers of Wet Wood Pulp.

	Below 50% Air Dry Weight
Northeast	$13.50
Lake Central	13.50
Southern	16.00
West Coast (in area).....	10.50
West Coast (out area).....	16.50

	50%-80% Air Dry Weight
Northeast	$11.50
Lake Central	11.50
Southern	14.00
West Coast (in area).....	9.50
West Coast (out area).....	15.50

Applying to Producers of Dry Wood Pulp.

	Above 80% Air Dry Weight
Northeast	$8.50
Lake Central	8.50
Southern	11.00
West Coast (in area).....	7.50
West Coast (out area).....	13.50

Should freight charges actually exceed these allowances, the difference may be added to the maximum prices

Domestic Rags

New Rags (Prices to Mill f. o. b. N. Y.)

Shirt Cuttings—			
New White, No. 1..	6.50	@	7.25*
Silesias No. 1.....	—	"	5.75*
New Unbleached...	6.75	"	7.50*
Blue Overall.....	—	"	5.50*
Fancy	—	"	3.50*
Washables	—	"	3.00*
Bleached Khaki Cuttings	—	"	4.25*
Unbleached Khaki Cuttings	—	"	3.50*

* OPA Maximum Prices.

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Sarpsborg, Norway
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Old Rags

White, No. 1—			
Repacked	*3.80	"	—
Miscellaneous	*3.20	"	—
White, No. 2—			
Repacked	*2.90	"	—
Miscellaneous	*2.65	"	—
Third and Blues—			
Repacked	*2.20	"	—
Miscellaneous	*1.80	"	—
Roofing Rags—			
No. 1	*1.55	"	—
No. 2	*1.45	"	—
No. 3 (bagging)	*1.35	"	—
No. 4	*1.35	"	—
No. 5A	*1.35	"	—
Old Manila Rope	5.75	"	—

OPA Maximum Prices.

Foreign Rags

All Prices nominal

New Rags

New Dark Cuttings	2.25	@	2.40
New Mixed Cuttings	2.00	"	2.20
New Light Silesias	5.50	"	5.75
Light Flannelettes	5.50	"	5.75
New White Cuttings	7.00	"	7.50
New Light Oxfords	4.00	"	4.50
New Light Prints	3.00	"	3.25

Old Rags

No. 1 White Linens	7.50	"	8.50
No. 2 White Linens	6.50	"	7.50
No. 3 White Linens	4.50	"	—
No. 4 White Linens	2.25	"	3.25
No. 1 White Cotton	4.25	"	4.75
No. 2 White Cotton	3.25	"	3.75
No. 3 White Cotton	2.50	"	3.00
No. 4 White Cotton	1.90	"	2.20
Extra Light Prints	2.00	"	2.40
Ord. Light Prints	1.75	"	2.15
Med. Light Prints	1.55	"	1.95
Dutch Blue Cottons	2.25	"	2.50
French Blue Linens	3.00	"	—
Checks and Blues	2.00	"	—
Linsey Garments	1.90	"	2.00
Dark Cottons	1.50	"	1.60
Old Shopperies	1.30	"	1.45
New Shopperies	1.45	"	1.50
French Blues	2.25	"	2.50

BAGGING

(Prices to Mill, f. o. b. N. Y.)

Gunny No. 1—			
Foreign	Nominal		
Domestic	4.25	@	4.35
Wool Tares, light	4.25	"	4.50
Wool Tares heavy	4.50	"	5.00
Bright Bagging	4.50	"	4.85
Manila Rope—			
Foreign	—	"	—
Domestic	*5.75	"	—
Jute Threads	5.50	"	—
No. 1 Sisal Strings	*4.00	"	—
Mixed Strings	2.00	"	—

* OPA Maximum Price.

Old Waste Papers

(F. o. b. New York)

OPA Maximum Prices

No. 1 Hard White Envelope Cuts, one cut	3.37½	@	—
No. 1 Hard White Envelope Cuts	3.12½	"	—
No. 1 Hard White Shavings, unruled	2.87½	"	—
No. 1 Hard White Shavings, ruled	2.50	"	—
Soft White Shavings, one cut	2.87½	"	—
No. 1 Soft White Shavings	2.50	"	—
Soft White Shavings, Misc.	2.15	"	—
No. 1 Fly Leaf Shavings	1.67½	"	—
No. 2 Fly Leaf Shavings	1.12½	"	—
No. 1 Groundwood Fly Leaf Shavings	1.25	"	—
No. 2 Mixed Groundwood Fly Leaf Shavings	.90	"	—
Mixed Colored Shavings	.75	"	—
Mixed Groundwood Colored Shavings	.90	"	—
Overissue Magazines	1.67½	"	—
No. 1 Heavy Books & Magazines	1.67½	"	—
Mixed Books	.85	"	—
No. 1 White Ledger	2.17½	"	—
No. 2 Mixed Ledger, colored	1.87½	"	—
New Manila Envelope Cuttings, one cut	2.87½	"	—
New Manila Envelope Cuttings	2.65	"	—
Extra Manilas	1.85	"	—
Mixed Kraft, Env. & Bag Cuttings	2.75	"	—
Kraft Envelope Cuttings	3.25	"	—
Triple Sorted, No. 1 Brown Soft Kraft	2.50	"	—
New 100% Kraft Corrugated Cuttings	2.25	"	—
No. 1 Assorted Old Kraft	1.75	"	—
New Jute Corrugated Cuttings	.90	"	—
Old 100% Kraft Corrugated Containers	1.75	"	—
Old Corrugated Containers	1.15	"	—
Box Board Cuttings	.72½	"	—
White Blank News	1.65	"	—
Overissue News	.85	"	—
No. 1 News	.75	"	—
No. 1 Mixed Paper	.70	"	—
Old Corrugated Containers	.82½	"	—
Mill Wrappers	.85	"	—

Twines

All Prices Nominal

(F. o. b. Mill)

(Soft Fiber)

Coarse Polished—			
India	.21	@	—
White Hemp	.21	"	—
Fine Polished—			
Fine India	.26	"	—
Unpolished—			
Box	17½	"	—
Paper Makers	.17	"	—
Tube Rope	19	"	—
Wall Paper	.20½	"	—
Wrapping	.23	"	—
Soft Fiber Rope	.19	"	—
Cotton	25	"	—

(Hard Fiber)

Medium Java	.18	"	—
Mex. Sisal	.16	"	—
Manila		"	—

PHILADELPHIA

Domestic Rags (New)

(Price to Mill, f. o. b. Phila.)

Shirt Cuttings—			
New White No. 1	.07½	@	.07½
New White No. 2	.04½	"	.05
Light Silesias	.04½	"	.04¾
Silesias, No. 1	.04	"	.04¼
Black Silesias, soft	.03¾	"	.04
New Unbleached	.07¼	"	.07½
Washable Prints	.03¾	"	.03½
Washable No. 1	.02	"	.02¼
Blue Overall	.04½	"	.05½
Cottons—According to grades—			
Washable shredding	—	"	.01¾
Fancy Percales	.03¼	"	.03½
New Black Soft	.02¾	"	.03
New Dark Seconds	1.75	"	2.00
Khaki Cuttings—			
No. 1 O. D.	.03	"	.03½
No. 2 Mixed	.02¼	"	.02½
Corduroy	.01¾	"	.02¼
New Canvas	.04¾	"	.05¾
New Black Mixed	—	"	.02¼

Domestic Rags (Old)

White No. 1—Repacked	3.80	"	—
White No. 2—Repacked	2.90	"	—
Miscellaneous No. 1	3.20	"	—
Miscellaneous No. 2	2.65	"	—
Thirds and Blues—			
Miscellaneous	1.80	"	—
Repacked	2.20	"	—
Black Stockings—			
(Export)	Nominal		
Roofing Stock—			
Foreign No. 1	Nominal		
Domestic No. 1	1.55	"	—
Domestic No. 2	1.45	"	—
Roofing Bagging	1.35	"	—
Old Manila Rope	5.75	"	—

Bagging

(F. o. b. Phila.)

Gunny No. 1—			
Foreign	Nominal		
Domestic	3.00	"	3.50
Sisal Rope	3.75	"	—
Mixed	1.00	"	1.50
Scrap—			
No. 1	3.25	"	3.50
No. 2	1.75	"	1.80
Wool Tares, Lo	4.00	"	4.25
No. 1 New Light Burlap	3.00	"	4.00
New Burlap Cuttings	3.75	"	4.00

Old Papers

(F. o. b. Phila)

OPA Maximum Prices

No. 1 Hard White Envelope Cuts, one cut	3.37½	"	—
No. 1 Hard White Shavings, unruled	2.87½	"	—
Soft White Shavings, one cut	2.50	"	—
White Blank News	1.65	"	—
Soft White Shavings, Misc.	2.13	"	—
No. 1 White Ledger	2.17½	"	—
No. 2 Ledger, colored	1.87½	"	—
No. 1 Heavy Books & Magazines	1.67½	"	—
Overissue Magazines	1.67½	"	—
New Manila Envelope Cuttings	2.65	"	—
No. 1 Assorted Old Kraft	1.75	"	—
No. 1 Mixed Paper	.70	"	—
Box Board Cuttings	.72½	"	—
Kraft Corrugated Cuttings	2.25	"	—
Old Corrugated Containers	1.15	"	—
Overissue News	.85	"	—
No. 1 News	1.00	"	—

BOSTON

Old Papers

(F. o. b. Boston)

OPA Maximum Prices

No. 1 Hard White Shavings, unruled	2.87½	@	—
No. 1 Hard White Shavings, ruled	2.50	"	—
Soft White Shavings, Misc.	2.15	"	—
No. 1 Fly Leaf Shavings	1.67½	"	—
No. 2 Fly Leaf Shavings	1.12½	"	—
No. 1 Groundwood Fly Leaf Shavings	1.25	"	—
No. 2 Groundwood Fly Leaf Shavings	.90	"	—
Mixed Colored Shavings	.75	"	—
New Manila Envelope Cuts, one cut	2.87½	"	—
Hard White Envelope Cuts, one cut	3.37½	"	—
Triple Sorted No. 1 Brown Soft Kraft	2.50	"	—
Mixed Kraft Env. & Bag Cuttings	2.75	"	—
Kraft Envelope Cuttings	3.25	"	—
No. 1 Heavy Books & Magazines	1.67½	"	—
New Manila Envelope Cuts, one cut	2.87½	"	—
New Manila Envelope Cuttings	2.65	"	—
White Blank News	1.65	"	—
No. 1 Assorted Old Kraft	1.75	"	—
No. 1 Mixed Paper	.70	"	—
Overissue News	.85	"	—
Box Board Cuttings	.72½	"	—
New Corrugated Cuttings, Kraft	2.25	"	—
Old 100% Kraft Corrugated Containers	1.75	"	—
Old Corrugated Containers	1.15	"	—
Jute Corrugated Cuttings	1.07½	"	—

Bagging

(F. o. b. Boston)

Gunny Bagging—			
Foreign	(nominal)		
Domestic	2.50	@	2.75
Sisal Rope No. 1	*4.75	"	—
Sisal Rope No. 2	*4.25	"	—
Mixed Rope	1.35	"	1.50
Transmission Rope—			
Foreign	(nominal)		
Domestic	2.75	"	3.00
Manila Rope—			
Foreign	(nominal)		
Domestic	5.75	"	—
Soft Jute Rope	5.25	"	—
Jute Carpet Threads	3.00	"	3.50
Bleachery Burlap	8.50	"	9.00
Scrap Burlap—			
Foreign	(nominal)		
Domestic	3.25	"	3.50
Wool Tares—			
Foreign	(nominal)		
Domestic	4.25	"	—
Aust. Wool Pouches	3.75	"	4.00
New Burlap Cuttings	4.75	"	5.00
Heavy Baling Bagging	4.00	"	4.25
Paper Mill Bagging	2.50	"	3.00
No. 2 Bagging	1.35	"	—

* OPA Maximum Price.

Domestic Rags (New)

(F. o. b. Boston)

Shirt Cuttings—			
New Light Prints	.04½	@	.04¾
Fancy Percales	.04¼	"	.05
New White No 1.	.06¾	"	.07
New Light Flannelettes	.05½	"	.06
Canton Flannels, Bleached	.06	"	.06¼
Underwear Cutters, Bleached	.06¼	"	06¾
Underwear Cutters, Unbleached	.05¼	"	.04
Silesias No. 1	.06	"	.06¼
New Black Silesias	.03	"	.03½
Red Cotton Cuttings	.03½	"	.04
Soft Unbleached Blue Cheviots	.06½	"	.06¾
Fancy	.05½	"	.06
Washable	.02¾	"	—
Khaki Cuttings	.02¾	"	.03
O. D. Khaki	.03½	"	.03¾
Corduroy	.03¼	"	.03½
New Canvas	.06¼	"	.06¾
B. V. D. Cuttings	.06¼	"	.06¾

Domestic Rags (Old)

(F. o. b. Boston)

White No. 1—Repacked	3.80	@	—*
Miscellaneous	3.20	"	—*
White No. 2—Miscellaneous	2.65	"	—*
Twos and Blues, Repacked	2.20	"	—*
Old Blue Overalls	2.25	"	2.50
Thirds and Blues, Repacked	2.20	"	—*
Miscellaneous	1.80	"	—*
Black Stockings	3.50	"	4.00
Roofing Stock—			
No. 1	1.55	"	—*
No. 2	1.45	"	—*
No. 3	1.35	"	—*
No. 4	1.35	"	—*
No. 5, Quality A	1.35	"	—*
Quality B	1.20	"	—*
Quality C	.95	"	—*
Old Manila Rope	5.75	"	—

* OPA Maximum Prices.

Foreign Rags

(F. o. b Boston)

Canvas	(nominal)
Dark Cottons	(nominal)
Dutch Blues	(nominal)
New Checks and Blues	(nominal)
Old Fustians	(nominal)
Old Linsey Garments	(nominal)
New Silesias	(nominal)

CHICAGO

Waste Paper

(F. o. b. Chicago)

OPA Maximum Prices.

Shavings—			
No. 1 Hard White Envelope Cuts, one cut	1.37½	"	—
No. 1 Hard White Shavings, unruled	2.87½	"	—
No. 1 Soft White Shavings	2.50	"	—
No. 1 White Ledger	2.17½	"	—
No. 1 Heavy Books & Magazines	1.67½	"	—
White Blank News	1.65	"	—
Mixed Kraft Env. & Bag Cuttings	2.75	"	—
No. 1 Assorted Old Kraft	1.75	"	—
Overissue News	.85	"	—
No. 1 News	.75	"	—
No. 1 Mixed Paper	.70	"	—
No. 1 Roofing Rags	1.55	"	—
No. 1 Roofing Bags	1.45	"	—

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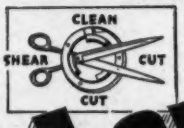

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Established 1882

Operating Conditions Improve in Canada

Results Even Better Than Expected Accrue From Cooperative Campaign of the Government and Paper Industry To Overcome Serious Shortage of Men For Pulpwood Cutting — Other Late Trade News.

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., January 24, 1944—Operating conditions in the pulp and paper industry have definitely taken a turn for the better. Results even better than expected have accrued from the joint campaign of the government and the industry to overcome the serious shortage of men for pulpwood cutting. It would appear that the total working force now engaged in operations in the woods has been increased to a figure of about 3,000 above the total at this time last year.

Commenting on the outlook, the Montreal Gazette says:

"The overall picture is that an encouraging dent has been made in the labor shortage which the industry estimated in the fall at from 20,000 to 35,000 men, depending on how quickly steps were taken to alleviate it. The difficulty is far from being completely or even nearly abated. But coupled with methods adopted to conserve wood in production and to speed deliveries to mills, the easing of the labor problem has made industry leaders hopeful of meeting the increased war and civilian demand for pulp and paper products more closely than they expected in the fall."

Settlement of Hearst Accounts

It is reported here that several pulp and paper companies have reached a settlement with the Hearst organization on the big standing debts to them of the Hearst papers. Hearst has owed an estimated amount of $8,500,000 to various Canadain companies, and with recent improvement in the fortunes of the Hearst organization efforts have been made to clear up the debt.

Late last summer the Hearst interests made a definite proposal to various Canadian creditors, seeking individual rather than blanket settlements with the various companies, and suggesting settlement in one of two ways, either (1) acceptance by the companies of a cash payment of 50 cents on the dollar plus a long-term newsprint contract, or (2) acceptance of 10-year 3¼% notes. As previous security, the creditor newsprint companies had held notes receivable, of dubious value in the past and in recent years these have been transferred by most companies from current assets to "deferred asset" classification.

Recently negotiations have been under way with individual companies on the lines already proposed but with certain special stipulations as to details, and several companies are reported to have made a settlement, either accepting cash or 10-year notes.

Taxes on the Industry

Action has been taken by Canadian newsprint companies to press their claims for further adjustment on taxes at Ottawa. The Canadian government made some concessions to newsprint companies, as a depressed industry, but the companies have contended that the concessions did not go far enough and higher profits ceilings should be allowed so that more adequate provision can be made for reserves for the future.

Newsprint Exports to Latin America

Allan Anderson, of the Latin-American Section of the Wartime Information Board, in an address in Montreal, stated that newsprint was the steady leader in Canadian exports to Latin-America, where in prewar days Swedish and Finnish paper was preferred because of the price. He said the quality of Canadian newsprint would make many South American buyers continue to buy here after the war.

Canadian trade with the South American nations had been handicapped in pre-war days by having no direct sailings from Dominion ports, Mr. Anderson said. This had made prices delivered "pretty high" sometimes, no matter how favorable the F.O.B. factory price might be.

He suggested that some of Canada's war-built merchant navy might well be retained after the war for this trade. "I don't know what is to be done with them after the war," he said. "But it would seem only reasonable to suppose that at least some bottoms will be used for trading with Latin-America."

SWEDISH TRADE MISSION

(Continued from page 11)

stitute for sisal string; we are drinking the well known Swedish "snaps" made exclusively from alcohol produced in the pulp industry, and, what is the most important of all, we have been able to supply many vital defense needs by aid of our forests. I do not think I am revealing any military secret if I say that our tanks and aeroplanes are to a large degree running on alcohol produced from our trees."

Stocks Built to Normal Size

"The fact that our chief markets for wood pulp and sawn wood goods have been placed beyond reach through the blockade has made it necessary to curtail the production radically, and the increased price for firewood has at the same time made it possible to clean the forests of a lot of wood waste and wood of inferior quality which it otherwise would not pay to take out. I am also pleased to take this occasion of mentioning that we have now been able to build up our stocks of pulpwood to normal size again. We will also shortly have a normal tonnage of chemical pulp of various types on hand at the mills.

Important Outlet for American Products

"Sweden has been, and I am perfectly sure will again become an important outlet for American products and, quite selfishly, I am hoping that there will also be some interest left for Swedish pulp among our old customers in this country the day a definite resumption of shipments becomes possible. Let us all hope that that moment is rapidly drawing near."